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COOPERATION BETWEEN THE PHYSICIAN AND THE HEALTH OFFICER.*

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For many years, longer indeed than some of you have been in this world, I have had two ideals—to improve the Public Health, and to increase the efficiency and prestige of the Medical Profession. I have lived long enough to see the public health in Virginia greatly improved, but my second ideal has not been so generally accomplished. The efficiency of our medical graduates has certainly been greatly increased, while many of the older men have made it a custom to keep up their efficiency by going away to take post-graduate work. Nevertheless, there is still a large proportion of our profession who are in need of similar traniing. The prestige of various groups and specialties, such as Public Health Officers, has undoubtedly increased, as is also true of the general run of the profession in certain localities. On the other hand the profession, as a whole, is being attacked, though I think unjustly attacked, from without, so that it is up to us as a body to work together for the protection of our profession. I am, therefore, going to take the liberty of talking to you for a little while on Cooperation between the Health Officers and the Practicing Doctors.

A short while ago I had the great privilege of listening to a delightful address made by our old friend, Prof. Allen Freeman, formerly Assistant Health Commissioner of Virginia. His subject was the Doctor and the Health Officer. He discussed the many changes that have taken place in the operation of health departments in the twenty-five years in which he has been connected with this type of work. Among the important and interesting things which be brought out was the development of the Infant Welfare Work. He first spoke of the terrible infant mortality which was taking place at the beginning of this century. He said that at the start the health departments tried to improve it by looking after the milk supplying the babies' food. The dairies were greatly improved, but the desired results were not obtained. Then it was decided to send visiting nurses into the homes, but again the expected improvement did not follow. After this a simple plan was evolved, namely, to have the visiting nurse bring the baby and its mother to a doctor who understood this type of work. From that moment the children's health began to improve and we were able to obtain the great decrease in infant mortality which our health departments consider the outstanding achievement of the century. The nurses did not wait for the babies to become seriously ill before bringing them to the doctor but they brought all the children so that the doctor could prescribe the proper food and the manner of living to keep them from getting sick. Please note that neither the health departments, nor their visiting nurses, nor the doctors alone could produce results; it took cooperation on the part of all three.

The type of work so successfully used in prolonging the lives of the babies is being extended to cover other age groups. First, the school children were regularly examined and an effort made to get them put in the best physical condition. Where defects are found, an effort is made to get the child referred to its own doctor or dentist, who gladly cooperates. Besides this, the Phsyical Education Department of the schools does its part in building up the body of the child, but only under the advice of the school doctor, who in case of doubt consults the child's regular medical adviser. Here again we have cooperation between the health workers of the school and the private doctor to whom the child is brought before it is really sick, and once more splendid results have been accomplished.

The pediatricians have learned that they

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must have their little patients brought to them at regular intervals so that they may be able to keep them well. And it is only a matter of time before the other doctors will have all their patients report at regular intervals for health check-ups, for the people are learning that it costs less to have the little defects remedied before getting ill, than to wait until they are in bed before calling their doctors.

We all recognize that the most handy measure of the health of a community and the efficiency of a health department is its death rate. As you very well know the health departments all check up on each others death rates, and a health officer rejoices when he can get a larger decrease in his rate than that of his next-door neighbor. As we have already seen, the greatest reduction in the death rate of the country has been due to the decrease in our infant mortality, which was not brought about until we obtained efficient cooperation between the health department and the private practitioner. Is there any reason why this cooperation should not be extended on all sides and the death rate cut in other fields? This is already true in tuberculosis work where the private doctors have done their full share, and it is practically true, although to a lesser extent, in the case of all infectious diseases, where the private doctor is expected to cooperate, even though he may not be recognized either officially or financially. The question before us is how can a closer, broader cooperation be achieved?

Unfortunately, there have arisen various misunderstandings, and even jealousies, between the health officers and the private doctors which must first be eliminated. Some of these misunderstandings are due to outside influences, for it is now fashionable to belittle the private practitioner and claim that only the specialist really knows anything about medicine. We must, however, remember that we all started out as plain ordinary doctors and that it was only by post-graduate study and experience that any of us obtained distinction. You Health Officers were first graduated as simple doctors, and still are Doctors of Medicine, even though you may be Doctors of Public Health too. The other doctors are primarily just as good as the specialists only they have not developed any particular line of work, while the specialists have largely neglected the parts of the practice of medicine outside of their specialties. It is the feeling of the Medical Society of Virginia that with a little help the doctors of this State can be made able to take care of any preventive or Public Health measure that may come before them. You Health Officers had first to go off and take a special course before qualifying for your positions. It will not take such a long period of study to bring the general practitioner up to the standard where he can efficiently cooperate with you in the prevention of disease, as well as in the treatment of it. There are, however, two primary difficulties with this proposiiton: the first is to show the doctor that the change in his methods, which will make him try to prevent disease rather than to cure it, will pay. The second is to educate the people so that they will be willing to pay the doctors to keep them well. All through the country there is a movement on foot to educate the people, by means of the newspapers and otherwise, as to the advantages of keeping well rather than being cured after illness has developed. In this field especially, the health departments can do as they have done in the case of the babies, namely, bring the people to the doctors before they get sick so as to get their small defects in body and manner of living corrected. There is a complaint, however, that this is not at present practicable for the reason that the doctors are not capable of making these health examinations efficiently. The Medical Society of Virginia by its Department of Clinical Education is going to try to furnish its members with practical clinical instruction which will make them entirely capable of carrying out these examinations. Again, cooperation on the part of the health officials is needed, for they are in the position to educate the people to the point where they will be willing to pay for being kept well, and they can also be gotten to go early to the doctor to get their defects corrected.

There is, however, the great problem of the people who are supposed to be too poor to pay a doctor anything. These people are now treated in the clinics and hospitals of the cities, which are in turn supported by the local government or by private benevolence. The doctors of the cities have been giving their time in taking care of the poor people in these clinics. They frequently are tremendously imposed upon in so doing, and have received but

little thanks either from the patients or from the institutions. It is time that at least a nominal wage be paid the doctors for this work, although there are some objections to it.

In the country districts the problem is more difficult. The country doctors are getting fewer and fewer each year, because they are paid so poorly for their services. The problem of getting the patient to the doctor for examination before he gets sick, and therefore is still capable of earning money, should improve the situation. We all know the terrible difficulty of collecting the deferred bill, even from people who are perfectly willing to pay cash for the inspection or repair of their automobiles. They use the excuse that their income has been cut on account of sickness. They will have no such excuse if they come to the doctor for examination when they are still well and able to work.

I am therefore coming to the Virginia Public Health Association, first to ask that it cooperate with the Medical Society of Virginia, which is attempting to give its members a chance to become more thoroughly qualified to do this cooperative health work. As a first step I am asking that the public health officers do their best to boost up the prestige of the local doctors, and not expect them to do their work without remuneration. Show them that you are willing to turn over to them paying patients and that you merely ask that they do their part. Tell the people to trust their local doctors and be willing to pay them as they are now willing to pay for other service. You Health Officers are paid for your work and are appreciated by the people; the local doctors will be better thought of if you insist that they be paid too, instead of being told they owe this duty to the State. I have worked in clinics and elsewhere with paid and with unpaid help. You simply cannot require efficient work from volunteer help. When they do not do well, you merely can smile and hope they will do better next time. With paid help you do not have to be so polite.

I finally am asking for hearty cooperation from all concerned. For the sake of the Public as well as the Profession we need cooperation in the old sense of the word, which means to work together as equal partners, each one being willing to give and take, and put his shoulder to the wheel for the common good. We are all so fond of using the word cooperate, but we do not always mean the cooperation which I have just tried to define. We sometimes use the word in the way a wife is said to have used it with her husband, from whom she demanded full cooperation, but really meant that he should furnish the cash and coo while she operated. This type of cooperation, however, practically always leads to trouble and I trust will not be demanded by anyone in the State of Virginia.

And now, my friends, though I have begged you to cooperate personally in every way with the rest of the doctors in the State, I am going to ask you to consider me impersonally, not as a rather disagreeable old man, but merely as the agent of the Medical Society of Virginia, or better still of the Medical Profession. You may simply consider me a voice, perhaps still of one crying in the wilderness, and help prepare a way for full cooperation within the profession to which we all belong. May I ask further that you will adopt the two ideals I presented at the beginning of this address, which now I can combine into one. Let us work together to increase the efficiency and prestige of the Medical Profession, so that we may be able to further improve the Public Health of the State of Virginia.

MOOTED POINTS IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE GALL-BLADDER.*

By STUART McGUIRE, M. D., Richmond, Va.
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Six years ago I read a paper before this Society reporting 1,000 operations on patients for disease of the gall-bladder. Since then I have operated on 273 additional cases. Based on this experience I desire to discuss briefly some of the mooted points in the diagnosis and treatment of the disease. I will bring up no new questions but the old ones which continue to perplex the surgeon.

Value of the Clinical History.

The fact that I attach the greatest importance to the clinical history makes me critical of the impairment of the value of this useful aid to diagnosis by the two extremes seen in modern practice. One is the reliance on the reports from the laboratories to the neglect of studying the patient; the other is making the

*Read by title at the sixtieth annual meeting of the Medical Society of Virginia, in Charlottesville, Va., October 22-24, 1929.

history of the patient so complete and exhaustive that it is difficult to sift the positive from the negative findings. Sometimes after talking with a patient and getting a clear-cut history that points definitely to a certain diagnosis, I am later puzzled when I read the typewritten pages of the history taken at the hospital in which the essential facts are submerged by the detailed enumeration of symptoms and diseases the patient never had. Perhaps for the purpose of hospital records the present standard case history should be taken and filed, but the surgeon should personally talk with the patient and give him the necessary time in which to tell his story in his own way. In gall-bladder disease the symptoms will often be classical, but again they may be very indefinite. If the symptoms are due to an inflammatory condition, there will be pain, tenderness, colic, fever and perhaps jaundice. If the symptoms are due to reflex irritation or toxic absorption, there will be vague gastro-intestinal disorders and general constitutional disturbances, such as indigestion, loss of appetite, recurring attacks of headache, and pain, stiffness and enlargement of the joints.

Value of Laboratory Reports.

Examinations of the urine and blood should be made in all cases, but while the occurrence of bile in the urine will indicate an obstruction in the biliary tract, and a positive and differential blood count will give information with reference to the presence of infection and the degree of resistances, the result of these examinations is not of positive diagnostic value. The analysis of the stomach contents after a test meal was at one time thought to give valuable information. It was believed that the irritation of gall-stones almost invariably increased the acid contents of the stomach. It has been learned, however, that hypochlorhydria is as frequently found accompanying the condition as hyperchlorhydria, and I no longer attach any importance to the result of a gastric analysis except insofar as it excludes other diseases. Both the icterus index and the van den Bergh test will show latent jaundice some time before pigmentation of the sclera and skin becomes evident, and the van den Bergh test will differentiate between hepatogenous and hematogenous jaundice, but neither of these tests give evidence on which the gall-bladder may be indicted. The electrocardiogram has reduced the percentage of wrong diagnoses by ruling out many cases of upper abdominal pain with chronic digestive symptoms, and sometimes even jaundice, which simulate gall-bladder disease closely but which are really due to disease of the coronary vessels and myocardium. The introduction of the X-ray and the demonstration of its ability to outline the kidney and to show the presence or absence of stones in the urinary tract lead to the hope that it would be equally helpful in the diagnosis of diseases of the biliary tract. This expectation for a time was unrealized. The first attempt of the roentgenologist was to photograph the gall-stones themselves, but this proved unsatisfactory. Gall-stones are not calcareous substances but are composed chiefly of fat, and it was found that they could be only visualized on the X-ray film when they contained a certain percentage of lime salts. Experience showed gall-stones could only be demonstrated in from thirty to fifty per cent of the cases in which they were actually present. Hence, while a positive X-ray report was conclusive, a negative report did not exclude the possibility of stones being present.

The next attempt was to photograph the gall-bladder. It was observed that a healthy gall-bladder did not show on the film under ordinary conditions. Therefore, if a distinct shadow could be outlined, such gall-bladder should be considered diseased, as its walls were thickened, or its cavity filled with pathologic material. Efforts were made to increase the effectiveness of X-ray to outline the gall-bladder by various expedients, such as pumping air into the peritoneal cavity, but real success was not obtained until Graham introduced his method of making a cholecystogram. This consists in the oral or intravenous administration of a dye which is normally eliminated through the bile and concentrated in the gall-bladder. If there is no diseased condition present and the flow of bile ladened with dye is unobstructed, then the gall-bladder can be seen to fill and empty. On the other hand, if a pathologic condition exists, which prevents the bile passing into the gall-bladder, then no shadow can be obtained. If after the administration of the dye the gall-bladder casts a shadow of normal size and shape, and is seen to fill and empty in the proper time, then it is reasonable to conclude it is not diseased. If the gall-bladder fails to cast a shadow because it does not fill with bile, then it is reason-

able to conclude there is some pathologic condition present.

A cholecystogram made by a competent roentgenologist is of the greatest value to the surgeon, but the report should not be considered as final. A negative report will often clear the indictment of an innocent gall-bladder, but a positive report should not be taken as conclusive evidence of the guilt of a diseased one.

We do not know very much about the functions of the gall-bladder and there may be physiologic as well as pathologic factors which influence its filling and emptying. The X-ray report that a gall-bladder was normal has often saved me from doing an unnecessary operation on a doubtful case. The X-ray report that the gall-bladder was pathologic has more than once led me to remove an organ which, perhaps, it would have been better to have left in.

To Operate or Not to Operate?

The diagnosis of a diseased gall-bladder being established, the next question is the treatment to be followed. There is no doubt of the fact that many patients can be temporarily relieved and benefited by medical measures. Some of the medical "cures" are based on rational therapeutics; others, like an olive oil treatment and the Lyon's internal drainage, are effective owing chiefly to their psychic influence. Gallstones may be quiescent but they are never innocent. Sooner or later they will give trouble. There is no permanent cure for the patient except by their surgical removal.

When to Operate?

This is often the most difficult and important question a surgeon has to decide in gall-bladder surgery. Will it be safe in an acute case to treat the patient medically until the virulence of the infection subsides and an operation can be done under more favorable conditions, or will it be better to operate at once and relieve pain, stop septic absorption, and remove the danger of gangrene and perforation? I can remember scores of acute cases that were kept in the hospital under medical treatment for one or two weeks and then safely operated on when the disease was quiescent. I can remember others whose symptoms were so urgent that an immediate operation was done and whose lives were undoubtedly saved by prompt intervention. On the other hand, I can recall patients who apparently died because of delay, who might have recovered if they had been promptly operated on, and others who apparently died because of undue haste, who might have recovered if they had first been treated medically. There ought to be some general rule to guide us in these cases, but at present there is none, and the best a surgeon can do is to settle the question to the best of his ability in each individual case. Personally, I do not believe that infection of the gall-bladder presents an emergency at all comparable to infection of the appendix, and unless a case of cholecystitis is attended by symptoms that cause alarm, I am in favor of waiting until the acuteness of the infection subsides.

Cholecystostomy Versus Cholecystectomy.

In the early period of my work practically all of the gall-bladders were drained, while in more recent years practically all of them have been removed. The change from an almost routine cholecystostomy to an almost routine cholecystectomy was based not only on the altered opinion of the surgical profession but on personal experience as well. Cholecystectomy is certainly a more difficult operation to perform than cholecystostomy, and at first it was hard to believe it could be done with less risk to life and that the patient would suffer no bad results from the sacrifice of the organ. With a little experience, however, I found the operation comparatively simple and safe. Convalescence was quicker and freer from complications, and, most important of all, the patients remained well. My figures showed that eight per cent of the patients whose gall-bladders I had drained came back to me for a second operation. I do not know how many went to other surgeons. On the other hand, practically all the patients whose gall-bladders I had removed remained permanently well. I now do a cholecystectomy on all patients except those whose general condition is so bad from sepsis, cholemia or other causes that they will only bear the gentlest and quickest procedure, and those in which the gall-bladder and adjacent structures are so acutely inflamed that it seems safer to drain as a preliminary operation. Patients who are drained are warned that they may have further trouble, and many of them are operated on a second time and the gall-bladder removed before they leave the hospital.

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Question of Removing an Apparently Normal Gall-Bladder.

In my series of operations gall-stones were present in about three-fourths and absent in one-fourth of the cases. For some reason it is always gratifying to a patient and the family to learn after an operation that gall-stones had been found and removed. The larger the stone or the greater the number, the more the satisfaction. The surgeon, however, knows that the formation of gall-stones is merely an incident associated with gall-bladder pathology. It is a fact that some of the most obviously diseased gall-bladders I have ever drained or removed contained no stones. No one questions the propriety of removing a diseased gall-bladder, although it contains no stones, but what should be done if in operating on a supposed case of gall-bladder disease the surgeon finds an apparently perfectly normal gall-bladder? All of us have had such an embarrassing experience. In my early work I frequently contented myself in such cases with removing the appendix and closing the abdomen. Most of these patients did not get permanently better. With increasing experience and fortified by the practice of my surgical friends, I now unhesitatingly remove these apparently innocent gall-bladders, provided the search of the abdomen reveals no other cause for the patient's symptoms. As previously stated, in certain cases I have had cause to regret not removing an apparently normal gall-bladder, and, since I have become more radical, whatever compunctions of conscience I may have felt at the operating room table have been relieved later by examination of the specimen in the laboratory where small stones that could not be palpated were found or other evidences of infection were demonstrated. During the preliminary examination of a patient to determine the advisability of an operation every possibility of an error should be carefully and maturely considered, but, if the question is decided in the affirmative, the conclusion should be regarded as final. The operating room is not the place for indecision and hesitation.

Discovery of Unsuspected Stones During the Course of an Abdominal Operation.

Whenever the abdomen is opened by an incision large enough to permit the introduction of the surgeon's hand, the gall-bladder should be palpated unless there is danger of carrying infection from the lower to the upper abdomen. In following this practice, unsuspected gall-stones are often found. In a few cases it may seem wise to remove the gall-bladder while the patient is on the table. If this course is followed, it is a temptation to grasp the gall-bladder with one hand and cut down on it with the other, but the safer practice is to complete the first operation, close the incision and protect it with a dressing before making a second incision.

In most cases when unsuspected gall-stones are found it will be best to leave their removal for a future operation. A double operation entails more risk than the combined mortality of the two single operations, and the responsibility of doing it in this instance has to be taken by the surgeon without conference with the patient or his family. While the law holds that a patient by the act of submitting himself to an operation authorizes the surgeon to do whatever in his opinion is found necessary, it is a wise policy for the surgeon to avoid the danger of criticism whenever he can conscientiously do so.

Technique of Operation.

The time limit of this paper will not permit me to discuss in detail the various questions with reference to the technique of doing a cholecystectomy. I shall, therefore, bring them up for discussion by describing the methods I have adopted. The anesthetic I employ is the gas-oxygen-ether sequence. Ether is so safe and satisfactory that I have little patience with the claims made for the substitutes proposed for it. The patient is placed in the dorsal position on the table. I have discarded pads or pillows under the back and other forms of angulation as they embarrass respiration and do not give better exposure. The incision I use is a straight upper right rectus beginning at the margin of the ribs and extending far enough down to give an ample field for operation. In case of doubt as to whether the patient has cholecystitis or appendicitis, I do not make an incision over the appendix and palpate the gall-bladder, but make the incision over the gall-bladder and hook up the appendix, thus being able to inspect both. After the abdomen is opened, before I palpate or inspect the gall-bladder, I make a complete examination of the other abdominal organs, and generally remove the appendix before I yield to the temptation to examine the gall-bladder itself. The gall-bladder is exposed by traction

on the right side of the incision with a retractor and the displacement of the bowels and other viscera on the left with a pad of gauze held by the flat hand of the assistant. The fundus of the gall-bladder is grasped by a pair of forceps and the organ drawn downward and then upwards, thus rotating the liver and exposing the ducts. The peritoneum and fat over the cystic duct and artery are then stripped off by blunt dissection and both duct and artery are clamped by three right angled forceps placed close together. The duct and artery are then divided between the forceps so as to leave two forceps on the distal and one on the proximal side. The gall-bladder is then removed from its bed by sharp dissection beginning at its neck and ending at its fundus. An effort is made to leave a margin of peritoneum on each side which can afterwards be sutured so as to cover over the raw surface on the liver. The cystic duct and artery are then doubly tied with catgut. The first ligature is placed beneath the lowest forcep which is removed as it is tightened. The second ligature is similarly tied below the remaining forcep. No effort is made to ligate the duct and artery separately or to cover over the stump. The refinement in dealing with these structures, advised by many surgeons, has been found to be time consuming and unnecessary. I drain all my cases with a strip of soft rubber tissue, and I do not hesitate to reinforce this with gauze when there is slight persistent bleeding which is difficult to control. I realize the force of the arguments advanced against the use of drainage in these cases, but personally I have never felt it could be omitted without serious danger to the patient. This view has been confirmed by conversations with other surgeons, several of whom have told me that at one time they gave up drainage but had been forced to go back to it because of the calamities that had resulted in their practice.

Owing to the use of drainage and the anatomical structure of the parts, there is more danger of infection and greater possibility of hernia after operations on the gall-bladder than after other abdominal operations; consequently, the wound should be closed with unusual care. I suture the various layers of the abdominal wall separately with chromic catgut and reinforce this by figure of eight silkworm-gut stitches that include the skin, fat and fascia.

The average confinement of my patients to bed after a gall-bladder operation is three weeks, and the average stay in the hospital is four weeks. When the patient returns home he is given typewritten instructions with reference to his future mode of living, and is also advised to place his case in the hands of his family doctor.

Factors Influencing Mortality.

In the series of 1,000 operations on the gall-bladder reported in a former paper the mortality was 6.7 per cent. In the 273 additional cases recorded in this paper the mortality was 2.2 per cent. The lower death rate is partly due to increased experience, but is chiefly due to the fact that the patients were operated on earlier and were better risks. The proportion of cases with stones in the common duct was much reduced, and the complication which came from neglect, such as abscesses, fistulae and secondary diseases of the liver were rarely encountered. With the improved knowledge and efficiency of the general practitioner and the increased information of the laity in matters pertaining to medicine, diseased conditions are recognized earlier and patients are brought more promptly to the hospital. The surgeon now rarely sees the huge abdominal tumors, the large stones of the bladder, the advanced cases of cancer of the breast, the chronic cases of suppurative osteomyelitis and the neglected cases of appendicitis and cholecystitis which were so common in a previous generation. Surgery is becoming easier and safer each year and surgeons are becoming standardized. In the old days there were two or three surgeons in each state whose names were a household word. Now there are hospitals in every town and city and hundreds of surgeons of almost equal ability who do good and efficient work. Fortunately for the mass of people, the day of the great individualist has passed and the average surgeon is now competent to care for the needs of his community. The work of the general surgeon still offers a field of useful service with adequate compensation, but it no longer offers the opportunity of great fame and fortune. Happily for the ambitious, these are still to be found in the work of original research and scientific investigation. While no man in the future will ever occupy the position in the hearts and minds of his countrymen of the great pioneer surgeons, there are some men living today who, because of their great discov-

eries, will have their names go down in history with those of Pasteur, Lister, Long, Koch and Roentgen.

CONTINUOUS IRRIGATION THERAPY IN INFECTED WOUNDS.*

By LINWOOD D. KEYSER, M. D., F. A. C. S., Roanoke, Va.

During the World War the treatment of infected wounds forced itself upon surgeons as a problem of supreme moment. Of the numerous efforts to solve this problem the development of the Carrel-Dakin technique probably gained most prominence. One often wonders why this excellent method has gradually but certainly passed out of general usage at the present time. It is true that the indications for the employment of the technique are not so frequent, but on the other hand, the opportunity for the treatment of draining wound cavities occurs often enough in civil practice and our usual methods are inadequate enough to stimulate some effort at improvement. As a source of annoyance to the surgeon and of economic and psychic strain to the patient, nothing is more disconcerting than a prolonged draining abscess cavity, whether the site of this be the abdomen, the pleural cavity, or infected bone.

In 1925 the following clinical experience aroused my interest in the problem. At that time there was admitted to my service at the Roanoke Hospital, a female child, eight years of age. She had been in good health until about two weeks before admission when she was seized with severe abdominal pain, vomiting and fever. Her temperature had been as high as 104 degrees F. For a few days she had seemed to improve but the abdominal pain persisted and three days before she came under my care her temperature had risen again, her abdomen had become swollen, and the family physician insisted upon her being brought to the hospital. When I first saw her she had a large fluctuating mass in the abdomen to the right of the umbilicus. The temperature was 103 degrees, the leucocyte count 22,000. The pulse was rapid and facies pinched. In short, she presented the classical picture of abdominal abscess with extreme sepsis, probably from a ruptured appendix.

Under nitrous oxide anesthesia a right rectus incision was quickly made, a gush of thick yellow pus being encountered upon opening the peritoneum. The abscess cavity was emptied of about one and a half pints of pus and three Penrose cigarette drains inserted, little effort being made at exploration. Within twenty-four hours the patient began to rally, her temperature and pulse dropping sharply to within a normal or slightly febrile range. The drainage was removed within a few days but for ten days an abundant amount of pus poured from the wound. At this time we began irrigating the wound with a warm 1-5000 potassium permanganate solution, this being done several times daily. While the drainage subsided to an appreciable extent, we realized after a few days, that the cavity of the wound would require a number of weeks for healing. During one of the irrigations, it occurred to us, that we might place two urethral catheters into the wound cavity and allow a solution of warm permanganate of potash to be flushed through the wound, every few hours during the day. This was done, one of the catheters being attached to an infusion apparatus, the other serving as an outlet for the fluid. The result was striking even after the first twenty-four hours. In a few days the catheters were removed leaving a small sinus tract from which only a small amount of seropurulent material escaped each day. The patient left the hospital within two weeks after the institution of this treatment. The result while not convincing, stimulated us to outline a procedure for the continuous irrigation of such walled off abscesses, when a similar opportunity arose again.

Sometime later, a young woman presented herself with a left tubo-ovarian abscess, which was removed at operation. Convalescence was satisfactory for ten days when a secondary abscess developed in the left iliac region. This assumed such proportions as to require incision and drainage through a left McBurney incision under nitrous oxide anesthesia. An abundant drainage of pus was established, a split rubber tube and several Penrose cigarette drains being placed. Within three or four days a small fecal fistual developed, probably from the sigmoid, and the entire wound became infected. A period of ten days elapsed during which time we used frequent hot wet dressings of potassium permanganate solution, 1-5000. The drainage material in the wound was changed frequently. Feeling that by this time our sinus tract to the sigmoid had been well

*Read at the sixtieth annual meeting of the Medical Society of Virginia, in Charlottesville, October 22-24, 1929.

walled off, we set up the continuous irrigation apparatus and applied it to the wound in essentially the manner we have since used. Within a few days the wound had taken on an entirely different aspect, fecal drainage was almost absent, and fresh healthy granulation tissue appeared at all sides of the sinus tract. The patient was dismissed from the hospital in about two weeks with the wound entirely healed and there was no recurrence of the fecal fistula.

The apparatus used and its application may be described as follows. From an irrigation stand a glass infusion bottle (Fig. 1, A) is hung. To the outlet of this, a rubber tube (Fig. 1, B) is attached. This tube carries a

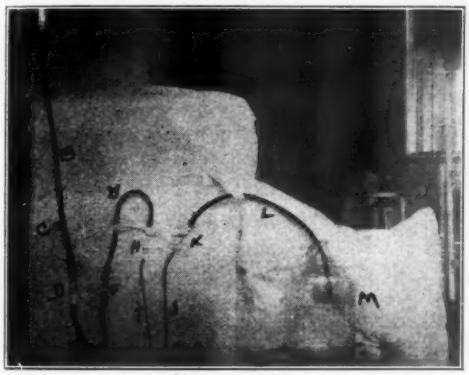

Fig. 1.—Continuous irrigation apparatus set up to show its constituent parts. See text.

screw-type stop-cock (Fig. 1, C) by which the flow of the fluid can be regulated. To the end of the rubber tubing B is attached a drip apparatus (Fig. 1, D) such as is used with the usual Murphy drip outfit. To the drip apparatus is attached a second rubber tube (Fig. 1, E) which is attached by a glass adapter (Fig. 1, F) to a rubber tube (Fig. 1, G). The tube G is, in turn, attached to a glass adapter (Fig. 1, H) by means of which this entire first portion of the inflow apparatus is connected with the inlet urethral catheter (Fig. 1, I). This urethal catheter is inserted into the wound after all drainage material has been removed, the size of the catheter (I) being from 10 F to 20 F, depending upon the size of the sinus tract. A second catheter (Fig. 1, J) is placed beside the catheter (I) in the wound and serves as an outflow tube. Several additional perforations may be placed in this catheter (J) to insure better outflow, provided these perforations are at a level below the skin surface. Both of these catheters are placed snugly but without force or trauma into the depth of the wound cavity and are tied in placed with a strand of silkworm gut, which is, in turn, attached to one of the stay sutures used in closing the wound (Fig. 3).

The outlet catheter is attached by means of an adapter (Fig. 1, K) to a rubber tube (Fig. 1, L). The tube (L) hangs over the bed. In

Fig. 2.—Continuous irrigation apparatus as applied to wound. Note level of drip apparatus just above level of wound. A ureteral catheter is here being used as inlet tube.

our earlier cases we allowed this tube to pour its contents by gravity into a large bottle (Fig. 1, M). This was fairly satisfactory but not infrequently the drainage through the outlet tube failed to compensate for the amount of fluid passing into wound, so that profuse wetting of the dressings and pooling of the fluid in the bed became a source of annoyance. Therefore, we have more recently attached the outflow tube (L) to a suction bottle in which a very slight vacuum is maintained by means of a Gray's suction pump, which is connected to a running water faucet.

Such an arrangement is shown in Fig. 4,

where we see the outlet tube (L) connected with the aspiration apparatus, consisting of the bottle (M), and the pump (P). Figure 5 shows the detail of the suction pump (B) connected to the faucet (A). Here a rubber tube (C) leads from the bottle. By turning on the water the pump aspirates air from the bottle and creates a vacuum, the negative pressure of which can be controlled by the rate of flow of the water.

Figure 2 shows how the irrigator is applied to a wound in practice. The drip apparatus (Fig. 2, C) is adjusted at a point about 2 inches

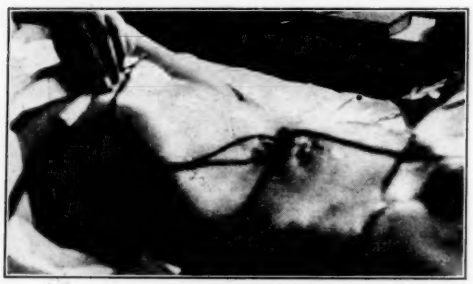

Fig. 3.—Detail of application of inlet and outlet tubes to wound cavity.

above the level of the wound and a steady drip of the solution is started from the infusion tank above. A rather rapid drip (2-3 drops per second) is usually used. When the cavity of the wound begins to fill with fluid, the suction pump is started and just such a rate of flow of water through the pump is maintained as will prevent an overflow. In this manner the irrigating fluid and effete products of suppuration are gently aspirated from the wound, being drawn into the vacuum bottle. Copious dressings are applied around the catheters, care being taken not to constrict them. Several large pads are placed and the entire dressing held in place by adhesive tie straps. From time to time the irrigating tank is replenished with fluid and the aspirating bottle emptied. In this manner, during a period of twenty-four hours, several gallons of irrigating fluid may be passed through the wound cavity at a pressure which even without the aspirating apparatus would be just enough to cause an overflow.

It is true that the dressings become wet in spite of the aspiration and the outer layers of gauze must be changed several times during the day. However, this is no more frequently required than the usual changing of dressings which is necessary in any management of such wounds, with which I am familiar. The whole apparatus is inspected hourly by a nurse and the patient himself is instructed to cut off the irrigator by means of the stop-cock and to call as soon as he notices the dressing becoming saturated or his bed becoming wet. Since using the aspiration bottle we have had little trouble from this source. On the whole, the adjustment of the rate of inflow and outflow of the fluid, while requiring a certain amount of extra attention on the part of the nursing and resident staff, has not proved difficult or unsatisfactory and has not required the constant presence of a special nurse. The whole apparatus, including the catheters in the wound, is disconnected, cleaned, sterilized, and reapplied by the house officer, once in twenty-four hours.

As for the irrigating fluid we have had several in use. Potassium permanganate, in strength of 1-5000, has been chosen in especially filthy and putrid abscess cavities. Its properties as an oxidizing agent and general cleanser have been utilized. To promote granu-

Fig. 4.—Continuous irrigation apparatus set up to show detail of parts. The suction pump (P) and aspirating bottle (M) are shown connected with the outflow tube.

lation after gross infection has been overcome and sloughs have separated, we have felt that an isotonic or slightly hypertonic solution, nontoxic and non-irritating, would be ideal. Locke's solution, Ringer's solution, hypertonic salt solution, boric acid solution, and glucose solution have been considered. Several years ago the rather strong impression was gained that normal saline solution saturated with boric acid had an excellent effect in promoting the health of granulation tissue. This has been used frequently with satisfaction as a wet dressing in preparing the field for skin graft work.

Such a solution is very slightly hypertonic, has a slight inhibitory effect on bacterial growth, and is certainly non-irritating. Its slight acidity should aid in the disintegration and solution of serous and mucopurulent discharges. Be this as it may, we have found the boric acid-saline solution an excellent fluid, always at hand in the hospital, for use in wound irrigation of the continuous type. At the present time we use equal parts of normal saline and saturated boric acid solution, mixed from the hospital stock.

In the application of continuous irrigation therapy to an open wound cavity as outlined above, certain principles of surgery must be respected and certain precautions observed. Otherwise trouble may be encountered. First, the wound must be draining well from a surgical standpoint so that no positive pressure is being exerted by the products of suppuration from within. Second, the draining wound should be given due time to be walled off by adhesions and the organizing fibrin-blood cell-fibroblast inflammatory defense, from neighboring uninfected areas. This we might roughly estimate at a period of a week to ten days at least after the establishment of the usual surgical drainage. Third, the pressure of the irrigating fluid as applied to the wound must be minimal, or just enough to promote a gentle overflow of the fluid from the wound. Otherwise we might again force fluid through the thin walls of the cavity and disseminate infection into a sterile space. The proper adjustment of the drip apparatus at a point just above the level of the wound and the regulation of the outflow by means of gentle aspiration take this factor into account. Fourth, the fluid used should at least be non-toxic when absorbed by passing a large quantity over raw surfaces in a short length of time. While I am by no means certain that an antiseptic solution applied in this manner with the idea of disinfecting the wound is always contraindicated, so far this technique has been used only with the intention of mechanically cleansing the wound. Fifth, we must raise the question as to whether continuous irrigation should be applied to a patient with a septic temperature, who is absorbing toxic material from his abscess cavity. This, to be sure, is a mooted point and is a definite departure from the principles of wound treatment by the Carrel-Dehelly or other lavage methods, where the application of an antiseptic has met with such pronounced success. For the present a conservative attitude has been adopted. Continuous irrigation has not been used by us in the presence of a marked septic temperature curve. Likewise, the occurrence of a sharp rise in temperature or a chill (which thus far we have not noted) would be a theoretical indication for immediately disconnecting the apparatus.

I feel that in continuous irrigation we find a good substitute for drainage by gravity. This is not always necessary for prompt wound healing but as every surgeon knows, gravity drainage is a thing to be desired when it can be practically applied. In dealing with an abdominal abscess, with pleural suppuration, with sinuses from infected bone, and the like, gravity drainage cannot always be employed. Continuous irrigation with a non-toxic fluid which is constantly replenished should do much to aid in every washing away the necrotic products of suppuration in a way that even gravity drainage could not do.

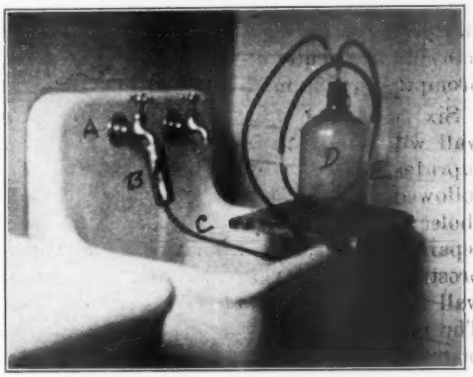

Fig. 5.—Gray's suction pump shown attached to water faucet. The aspiration bottle (D) is connected with the outflow tube by means of the rubber tube and adapter (E).

In our experience the response to treatment of infected wounds by the continuous irrigation technique has been uniformly striking. A draining wound which is pouring forth each day a thick purulent discharge, often foul smelling, very quickly undergoes a change which is definitely appreciated by the hospital staff and the patient himself. In a few instances within twenty-four to forty-eight hours the result has been particularly remarkable. The drainage becomes thin and serous, pinkish granulations replace sloughing tissue along the wound margins and within the cavity and

the walls of the cavity noticeably begin to fill in. As this process takes place the size of the irrigating catheters may be lessened. In a few instances we have even used a ureteral catheter for the inlet tube, the outflow catheter then being a small urethral catheter of a size 9 to 10 F. Figure 2 shows such an arrangement as applied.

During the past four years we have applied continuous irrigation to infected wounds more or less as outlined above, in sixteen cases. As to type they have included the following:

Six abdominal abscesses, one of indeterminate cause, and four of appendiceal origin. The secondary abscess developing in the patient mentioned above, who had had a left salpingo-oophorectomy, also belongs in this group.

One lumbar abscess cavity which developed and persisted for several weeks after nephrectomy for acute pyonephrosis responded promptly to this mode of treatment.

Six secondary infections in the abdominal wall with abscess formation in the fatty and suprafascial tissues were thus treated. These followed such operations as appendectomy, cholecystectomy, gastroenterostomy (2 cases), repair of incisional hernia, and suprapubic prostatectomy (marked infection in abdominal wall following a second stage prostatectomy). The results in each instance were quickly appreciated and we feel that the period of hospitalization was materially shortened for each patient thus treated.

One case of extensive carbuncle involving the suboccipital region of the neck may be mentioned. Ten days after radical operation with knife and cautery the bed of the wound seemed indolent and presented sloughing necrotic tissue which we felt would require a long period of time for healing. Continuous irrigation was applied by burying the catheters under the dressings and allowing the back of the patient's head to rest near the edge of the bed on a Kelly pad. The irrigation was stopped at night. Within a few days the slough had separated and a pink bed of granulation tissue presented itself. The patient was allowed to go home for about two weeks when he returned for Thiersch grafting which was satisfactorily carried out.

Two cases of persistent drainage from bone cavities following the incision and drainage of acute osteomyelitis have been quickly and rather strikingly cleared up within a week.

Detailed case reports are often burdensome and are not always necessary to illustrate ones point. However, I shall give the high points of three cases which are typical of the series mentioned above.

V. O.—Aet. 14, F. Roanoke Hospital, No. 5633. Admitted with evidences of acute appendiceal abscess. Course rales indicative of acute diffuse bronchitis. Had been sick for five days. Condition so critical that immediate operation was done. One pint of pus evacuated. Necrotic appendix removed and base ligated without inversion. Insertion of numerous cigarette drains. Wound closed with chromic catgut and through and through silkworm gut sutures. Patient promptly developed acute bronchopneumonia and hovered between life and death for ten days. Then began to rally. Intensity of wound infection pronounced, with sloughing of tissue and cutting through sutures. Wound resutured (local anesthesia), with through and through quilled sutures of silkworm gut. Application of hot potassium permanganate dressings for five days. Temperature under 100 degrees. Continuous irrigation applied seventeen days after operation. Remarkable improvement in wound in forty-eight hours. Drainage less abundant, very thin, and had lost foul odor. Edges of wound began to show some evidence of healthy granulation tissue. After five days, ureteral catheter had to be used for inlet tube. Twenty-four hours later or six days after application, irrigation was discontinued. Small sinus which required about ten days for complete healing persisted. Patient then discharged. No evidence of hernia after eighteen months.

Mrs. A. A.—Aet. 25, F. Roanoke Hospital, No. 7547. Admitted with acute appendicitis of thirty hours' duration. Appendix ruptured with acute diffuse peritonitis. At operation removal of necrotic appendix, stump ligated and not inverted. Large quantity of seropurulent fluid aspirated from abdominal cavity. Culture showed mixed infection of colon bacilli, streptococci, and staphylococci. Numerous cigarette drains in pelvis, in lateral cecal fossa, and in right upper abdominal fossa. Closure of peritoneum around drains with interrupted chromic catgut, through and through silkworm gut sutures being used for the muscles, fascia and skin. The patient developed acute nephritis with oliguria, blood casts, and red blood cells in the urine. Stimulation of diuresis by usual methods was difficult and blood urea mounted steadily until it was 428 mg. per cmm. on seventeenth day. Had been running temperature from 99 degrees to 101 degrees during this time. After seventeenth day diuresis in greater volume was obtained and patient began to show signs of improvement so far as nephritis was concerned.

Shortly after operation the drainage took on a putrescent character. No definite fecal drainage, however, was ever noted. The wound poured forth an abundance of brownish foul pus each day. Hot dressings, frequent change of drains, and interval irrigations with hot potassium permanganate solution were carried out after a few days. Because of our efforts to treat the septic nephritis and the character of the patient's temperature curve we did not establish continuous irrigation until the end of the fourth week. Even at this time shreds of sloughing tissue were being removed from the wound

and the character of the drainage had not changed appreciably.

Within two or three days after the institution of continuous irrigation the drainage from the wound had become thin and seropurulent and had lost its almost fecal odor. Likewise the amount of sloughing tissue which we could remove easily from the wound had diminished to a marked degree. Within one week the drainage had become serous and the cavity of the wound had filled in appreciably by the process of granulation. Continuous irrigation was kept up for six days. Then it was stopped, being again replaced by interval irrigation with boric acid saline solution and the application of wet dressings. One week later the patient was ready for discharge so far as her wound was concerned. She was kept in the hospital however, for a week longer for treatment of the subsiding nephritis.

C. T.—Aet. 16. Roanoke Hospital, No. 6865. Admitted December 27, 1928, having been shot with a pistol bullet which lodged in the medullary cavity of the left femur. This was removed within a few hours through a lateral window in the shaft of the bone. A vaseline pack was placed. The wound became infected and coincidentally the patient developed an influenzal infection which persisted for about one week. Drainage from the bone cavity continued for several weeks after the temperature had become normal. The wound was found each day to be the site of a considerable amount of purulent drainage. Continuous irrigation was applied February 1, 1929, or about five weeks after operation. Within three days the drainage had become serous and the cavity began to show prompt signs of filling in by granulation tissue. The patient was discharged from the hospital with the wound entirely healed on February 12th. Both Dr. Wescott, the orthopedic consultant, and myself feel that he was saved at least two months' further stay in the hospital. Incidentally, this patient has been seen frequently during the past seven months and there has been no sign of recurrence of his bone infection.

In conclusion, it may be said that this method of handling chronic draining abscess cavities, while still in process of development in our hands, has proven its worth. It is not offered as a substitute or improvement on the Carrel-Dakin technique nor is its purpose exactly the same. I do believe that it will help to clean up rather rapidly a number of chronic draining wounds which seem to us, as we see them on our daily rounds, never to show signs of healing or of ceasing to pour forth their daily output of pus for months and months. Without being extravagant in any claims, I have described the technique as it has been applied and, from the experience we have had with the method, we cannot but approach its usage in the cases to come with a certain degree of enthusiasm. Furthermore I may say that while I have had no experience with the application of continuous irrigation in cases of duodenal or persistent biliary fistula, in certain selected cases of this type it might find a field of usefulness both in promoting healing and in preventing the skin necrosis with which these conditions are usually associated.

DISCUSSION.

DR. W. H. GOODWIN, University: Those of us who have had to care for these suppurating lesions certainly ought to appreciate the helpful suggestions given to us by Dr. Keyser in his paper. Continuous irrigation will certainly tend to minimize the duration of suppuration, shorten the duration of disability, and reduce the danger of spreading infection.

Experiences in the World War gave us several excellent convictions. The use of typhoid inoculation kept the incidence of typhoid fever very low, and we were more than ever convinced of the value of tetanus antitoxin. I did not see a single case of tetanus in Base Hospital 41. We got from the World War the Thomas splint, the use of which has persisted in civil life. We used the Carrel-Dakin method of treating these wounds in military hospitals with a high degree of success, but in civil life we seem to have gotten away from the use of hypochlorite of soda solutions, which we know to be the Dakin solution. I wonder why? It seems to me that we are not willing to go to the trouble to carry out the proper technic. It is necessary that the solution be made up by a chemist who knows how to do it, as otherwise the solution is irritating and does more harm than good. Dr. Keyser uses the potassium permanganate solution instead of the Dakin solution. It is a good germicide, and it seems the chemical effect is good; it is cleansing. We have seen some of these cases of infected wounds that keep draining month after month, and, if we can do something to clear up these lesions by draining and irrigating, I think we should try. Of course, counter-drainage is very, very necessary, but in some parts of the body it is difficult to get counter-drainage. As Dr. Keyser mentioned, where we have an abdominal lesion, and counter-drainage cannot be secured, continuous irrigation as applied by him is a good suggestion. The procedure Dr. Keyser advocates is somewhat complicated, but if we use it with exactness and do not keep the dressing drenched with solution all the time, but use this rubber tubing, I think we shall find it a valuable procedure.

DR. KEYSER, closing the discussion: There is one point I should have brought out more clearly. The illustration and graphic markings make the apparatus used appear more complicated, perhaps, than it really is. The set-up consists of a sterile Murphy-drip apparatus, which is attached to a plain catheter inserted into the wound. Any form of aspiration apparatus can be attached to the out-flow catheter. These pieces of apparatus are available and can be set up quickly in any hospital. The apparatus is simple, easily gotten together and applied, and it really works.

FOOD ALLERGY IN THE SPECIALTIES AND IN GENERAL MEDICINE.*

By WARREN T. VAUGHAN, M. D., Richmond, Va.

Clinical allergy has been described as the youngest of the medical specialties. This designation is true in part only. While it is one of the most recent concepts of clinical

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medicine, we cannot yet accurately evaluate its importance. There are enthusiasts who attempt to see all things medical as expressions of allergy, and they are balanced by those who deny to allergy any place of importance. The truth is, of course, somewhere between these extremes and its exact position, time alone will determine. The inaccuracy in the above designation of allergy is its description as a specialty. I would emphasize that allergy cannot be divorced from general medicine, and hope to show you how it must often be included in a consideration of the aspects of diverse medical conditions.

While allergic methods are often unsuccessful, even in those diseases which are now by common consent called allergic, yet success is achieved in a sufficiently large proportion to justify giving allergic methods a recognized place in therapy. Therapeutic success varies with the type of allergy and, curiously, with geographic location. Pollen asthma and hayfever properly treated are usually satisfactorily relieved. I say properly treated, because unless one has had an unusual experience in allergic therapy one's treatment is rarely complete.

One of the most pernicious influences toward unsuccessful pollen therapy is the popular fifteen dose treatment set. There is no justification whatever in assuming that by the end of the fifteenth dose complete desensitization will have been accomplished. Some patients require fifteen, some twenty or even more. But the doctor and the patient having completed the fifteen doses, settle back in the assurance that desensitization has been completed. If the subsequent results are unsatisfactory, proper pollen therapy receives, unjustifiably, "a black eye."

But when pollen therapy is properly administered the results are good. In the central states, where there is a high pollen prevalence and the vast majority of the asthmatic and rhinitis cases are pollen cases, allergists report from eighty to ninety per cent satisfactory results from treatment. Along the Atlantic Seaboard and especially in this section, where pollen concentration is relatively low, the obscure sensitizations to less usual inhalants or alimentary allergens form a much higher proportion and the percentage of good therapeutic results stands around sixty. There are probably just as many of these obscure cases in the Middle West but there are in addition so very many more pollen cases that these latter boost the figures for good results.

In those diseases of more obscure etiology but in which allergy appears to be playing a part, the definite successes are still lower. This is illustrated in my own figures of fifty per cent in the general run of dematitis including eczema, thirty-seven per cent in migraine, and thirty-three per cent in pruritus ani.

These figures for success in the more obscure allergic manifestations may appear low, but we should realize that they are diseases in which other methods have failed. My eczemas have almost invariably been through the hands of at least one, sometimes several, dermatologists, and, as a consequence, those that I study from an allergic standpoint are those that have resisted other measures. Fifty per cent success among these is therefore a real achievement. The migraines likewise have usually been down the line of therapy, and if over one-third are relieved they represent thirty-seven out of every hundred persons who have already virtually given up and resigned themselves to invalidism.

I give you these figures on successful allergic therapy, with their wide range from thirty-three to ninety per cent, so that you may be informed as to actual results obtained by allergists, unbiased by hyperenthusiasm.

In this communication I will not discuss the more usual and obvious forms of clinical allergy which are usually easily diagnosed, in which the chief problem is the finding of the allergenic cause. This at once eliminates most of the inhalant allergies and leads us to the alimentary allergies, especially food sensitization. Even in this group I will not discuss the obvious allergies often due to food, such as asthma, vasomotor rhinitis, urticaria, etc., but the more obscure conditions which are usually not at all related to allergy but in which allergy occasionally plays a part.

If you will bear in mind that the four dominant characteristics of the allergic reaction are smooth muscle spasm, serous and catarrhal exudation and local eosinophilia; if you will recall that smooth muscle is widely distributed through the body in organs and tissues, such as the bronchi, the blood vessels, the gastrointestional tract, the urinary tract, the uterus and the eyes; and if you will recall that anaphylaxis or allergy represents an altered re-

activity of the body tissues as a whole; if you will bear in mind that it has been demonstrated that protein is often absorbed undigested and appears in the blood, and if you will accept the statement that ten per cent of the entire population are frankly allergic while possibly as high as fifty per cent show at times evanescent or obscure allergic manifestations—you will realize how protean may be the manifestations of this disease.

As Richet[1] has said, "It is probable that anaphylaxis plays a part each day in modifying our constantly unstable state of equilibrium, and in developing in us a humoral personality, just as our memory and antecedent experiences and sensations create for us a psychic personality."

For purposes of classification I shall describe the manifestations of food allergy as they appear in their different medical specialties.

Allergy in Surgery.—I have seen several cases of food allergy with abdominal manifestations, which have previously been operated upon for appendicitis either acute or chronic, in which the symptoms were not subsequently relieved until after the finding of the food allergen. McIntosh,[2] at the Portland meeting of the American Medical Association, presented a series of cases in which the appendix had been removed without benefit and in which tissue examination showed a local accumulation of Charcot-Leyden crystals and eosinophils, which he interpreted as indicative of local allergy. Occasionally food allergy will be responsible for symptoms quite indistinguishable from pyloro-spasm or even peptic ulcer.

Allergy in Gastro-enterology.—The abdominal symptoms of food allergy may be either acute or chronic. When acute, manifestations are usually gastric at the beginning; later, colonic. An acute abdominal pain with nausea and possibly vomiting, with the pain localized in either the epigastrium or the hypogastrium, and followed later by diarrhea, with or without mucus, is the classical representation of acute abdominal food allergy. Subacute or chronic abdominal allergy may manifest itself by hyperperistalsis, especially in the colon, and with an increased secretion of mucus in which eosinophils and Charcot-Leyden crystals may be found.

On the other hand, hyperperistalsis and diarrhea do not necessarily occur. I have one patient who suffers from spastic constipation only when she is eating foods to which she is sensitive. Constipation and general toxemic symptoms are her only allergic manifestations.

Templeton and Bollens[3] have developed a method for testing for sensitization or anaphylaxis, using the nonstriated muscle of the colon. As you know, the classical laboratory method consists in exposing sensitized guinea pig uterus muscle to the suspected allergen. These authors, working with larger animals, insert a small balloon into the colon for the purpose of recording evidence of increased spasticity of this portion of the intestional tract after injection of an allergen to which the animal is sensitive.

Rowe,[4] who has made an extensive study of food allergy, has classified the gastro-intestional symptoms of fifty food allergics. Of these, twenty complained of pain and soreness in the epigastrium, four in the right upper quadrant, sixteen in the mid-abdomen, twenty in the lower abdomen, and ten presented the ulcer type of pain. Intermittent cramps were complained of by twenty-four, and fourteen manifested mucous colitis. Twelve had diarrhea and thirty-two were constipated. Other symptoms manifested by these uncomplicated food allergics were cancer sores, coated tongue, foul breath, abdominal distention, belching, sour stomach, pyrosis, epigastric heaviness, nausea and vomiting.

X-ray studies in thirty-two showed normal findings in twenty-three, duodenal stasis in two, and a spastic colon in seven. Gastric analysis was normal in twenty-three cases, showed a subacidity in four, and an achlorhydria in three.

Twelve of the fifty had already been operated upon for their symptoms, the duration of which averaged fourteen years.

In this series Rowe obtained excellent therapeutic results from food avoidance only, of at least one year's duration at the time of his article, in sixty-six per cent. He reports definitely good results in the remaining thirty-four per cent.

Abdominal allergy may by its production of local edema and spasm enhance the manifestations of other organic abdominal pathology. In gall-bladder disease, the patient often remarks that certain definite foods increase the symptoms. Here we are not necessarily dealing with pure allergy. There may be true

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gall-bladder disease, with exacerbations due to local allergic reaction. The best non-surgical treatment will include removal of the offending allergens.

Allergy in Proctology.—Among Rowe's fifty food allergics, he found four cases of pruritus ani and two of proctitis, relieved by food avoidance.

In cooperation with Dr. E. H. Terrell, of Richmond, I made a study of a series of cases of pruritus ani. These cases were selected by Dr. Terrell, who had made a careful proctologic study and found no local cause other than, in some of the series, a perianal eczema. Thirty-three per cent were relieved by food avoidance, after we had found by skin tests the specific foods to which they were sensitive.

Allergy in Urology.—When we consider the widespread distribution of smooth muscle in the urinary tract, we realize the possibility of local allergic manifestations. Duke[5] especially has described symptoms of bladder irritation, without recognizable physical cause, and pain, due presumably to smooth muscle spasm, which may be severe enough even to be called kidney colic, as due to food allergy. I myself have had little success in finding an allergic cause in this type of urologic condition, but it would be well to bear in mind the possibility of allergy in these types of symptomatic urinary disturbances without local pathology.

Allergy in Gynecology.—Both Cooke[6] and Duke[5] report menstrual disturbances associated with food allergy. This includes not only painful menstruation, presumably due to smooth muscle spasm, but also menstrual irregularity. I have had little occasion to follow this in my own work. I recall one case of a girl whose only allergic manifestation was headaches, coming on only at time of catamenia. She was egg sensitive and the headaches were entirely relieved on avoidance.

Allergy in Rhinology and Otolaryngology.—Nasal manifestations of allergy are common and are not due entirely to inhalant allergens, being not infrequently associated with sensitization to foods. Sneezing is probably the most frequent symptom, and is usually accompanied by a more or less profuse watery secretion. It is not infrequent to obtain a history of violent sneezing immediately after arising in the morning. While this is usually associated with inhalant sensitization, especially to dust or feathers, there is often an associated food allergy which serves to increase the intensity of the reaction. I doubt whether anyone but an allergic can successfully sneeze ten or fifteen times in rapid succession. So characteristic is this that when you hear a patient complaining that when he starts sneezing he can't stop until he has sneezed half a dozen or more times, look for allergy.

Seasonal vasomotor rhinitis or hayfever is usually easily recognized, but chronic nasal allergy without seasonal variation is often mistakenly treated as a local disease. The allergist sees many patients who have had intranasal surgery without benefit and who are promptly relieved after the discovery and removal of the offending allergen. Chronic edema of the nasal mucosa without definite clear-cut local etiologic factors should raise the question of allergy. Polyps frequently follow this chronic edema, and these also should cause one to bear in mind the possibility of protein sensitization.

Sometimes the only local manifestation is a sense of pressure or headache due to blockage of the sinuses from edema. Only recently a man came to my office complaining only of a sense of pressure at the base of the nose. The symptom was so indefinite and unassociated with any other personal or family history of allergy that I advised against skin testing. However, he said he had tried everything else and asked me to go ahead anyhow, and to my surprise, I found violently positive reactions to the pea-bean group, peanut, strawberry and a few others. In the course of conversation it then developed that he had had several years ago attacks of angioneurotic edema following the eating of strawberries. He had forgotten this on the preliminary questioning. Incidentally, he eats peanuts practically daily.

Itching of the roof of the mouth is characteristically an allergic manifestation, although it does occur also in acute coryza. Angioneurotic edema, often allergic, may involve the lips, tongue, nose, pharynx, larynx. I have one man who develops a swelling of the upper lip only after drinking a certain kind of whiskey. A law-grade chronic allergic edema of the larynx and trachea may be responsible for hoarseness or a chronic cough without any asthma or vasomotor rhinitis. Here, as in all other allergic manifestations, a positive past personal history of allergic outbreak or a positive family history is very

helpful in arousing suspicion of allergic etiology.

Chronic allergic rhinitis equally as well as mechanical local obstruction predisposes to sinus infection and often poor results following local treatment of a true sinusitis are due to the fact that a concomitant allergy has been over-looked. Many of the rhinologists have come to realize this and in the event their sinus cases do not clear up satisfactorily following local treatment, they send them on for allergic studies—to be used as an aid to the local treatment.

Even the ears are not free from the stigma of allergy. I have several cases of eczema of the external ear and auditory canal associated with food sensitization, and often also with feather sensitization. The patient sleeping on a feather pillow, with the ear warm and moist and applied directly to the pillow, establishes a beautiful direct contact with feather protein. In this type of case, it is best not only to change to some other type of pillow but also at the same time avoid whatever food to which the patient reacts.

Allergy in Pulmonary Disease.—The chronic allergic cough has been mentioned. True bronchial asthma is not always or necessarily inhalant allergy. It may accompany sensitization to food. Conversely, food allergy may manifest itself in the respiratory tract in other forms than as a typical bronchial asthma. I have seen a number of cases of what any of us would agree in calling ordinary chronic bronchitis without in any way presenting the picture of asthma, yet which were definitely food allergic in origin. These are relieved by food avoidance, the symptoms returning on subsequent exposure to the offending allergen.

Few of us nowadays still believe the old teaching that asthma and tuberculosis do not occur together. I have seen tuberculosis diagnosed as asthma and asthma diagnosed as tuberculosis. I have seen several patients with both tuberculosis and asthma, and at least one with tuberculosis and an allergic bronchitis. Even in the latter case where there are no typical asthmatic paroxysms it stands to reason that the patient will recover more satisfactorily from his tuberculous infection if the food or other allergen responsible for his bronchitic symptoms is avoided. I have seen a case of quiescent tuberculosis activated by an attack of asthma.

Allergy in Cardiology.—Some claim that extra-systoles and attacks of tachycardia may be associated with allergy. I personally have had no such experience, although I have searched for allergy a few times in this type of case. The nature of the cardiac muscle, however, makes this not altogether improbable.

I have seen and reported one tremendously interesting case, that of a decompensated hypertensive cardiac in whom contact with specific allergens to which the patient was sensitive precipitated repeatedly attacks of acute pulmonary edema. The overload of the allergic reaction appeared to be just enough to throw out the cardiac regulatory mechanism. These acute attacks were definitely not bronchial asthmatic, but typically cardiac asthma. These two clinical manifestations are altogether different and need not be confused. Furthermore, this patient had never had bronchial asthma.

Neuropsychiatric Manifestations.—Migraine is frequently an allergic manifestation, although in the majority no allergic etiology is found.

I have two cases of typical trifacial neuralgia associated with wheat sensitization who were relieved by wheat avoidance. These are the only two of a large number of trigeminal neuralgias which I have studied. Here, once again, I would emphasize that allergy is far from being the only one or even the most important of the etiologic factors in most of the conditions which I have been enumerating. However, in those who do not respond to other therapeutic measures, bear allergy in mind.

Asthenia is often a most pronounced symptom, sometimes practically the only one. I have among my patients a woman who, when she eats wheat is perpetually tired. Her exhaustion is at times so pronounced that she describes it as painful. On wheat avoidance she becomes full of energy.

Chronic food allergy may quite change the personality of an individual. One of the children in my series has an unusually nice disposition. Let him eat one of the foods to which he is sensitive over a period of several days, and he becomes an irritable, whiny, bad tempered lad.

Shannon[7] has made a special study of the psychic reaction in allergic children and has described rather startling changes in children's temperament and intelligence as measured by their capacity to do their school work follow-

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ing protein avoidance. I have tested out several epilepties, usually without success, but in two children I have been able to relieve the epilepsy by food avoidance. One was wheat sensitive, and the other sensitive to chocolate. Wallis and Nicol[8] have made a special study of allergy in epilepsy and have been able to relieve 38 per cent of their cases by dietary measures only, and have, as a control, produced attacks by having these patients eat the foods to which they are sensitive.

Duke[5] has described cases presenting Menière's syndrome due to food allergy. I have studied three or four such cases with this in mind, but was not successful in demonstrating an allergic basis.

Dermatologic Manifestations. — Urticaria, eczema and angioneurotic edema have been discussed. Alexander and Eyermann[9] have reported cases of purpura, definitely allergic and relieved on protein avoidance.

Erythema multiforme sometimes follows food sensitization. Anthony[10] explains the frequency of this disease in the spring and autumn as due to alterations in food and clothing. Engman[10] describes the case of a girl who developed erythema multiforme every time she ate pork chops; Galloway,[10] a case due to the eating of blackberries and nuts; and Fordyce,[10] a case of iris erythema after the eating of lobster.

Lowe[10] states that definite foods, such as eggs, have occasionally produced attacks of dermatitis herpetiformis.

Allergy in Pediatrics.—All that has been said thus far concerning allergy in general medicine as represented in its special branches applies equally well in pediatrics. Indeed, as far as the future welfare of the child is concerned, the problem is much more vital to the pediatrist than to men whose primary interest is disease among adults. The child is born with the allergic predisposition, and the sooner an actual sensitization is discovered the better it will be for the future health of that person.

Conclusions.

This rather sketchy communication is presented in the hope of showing how interrelated allergy may be with other disease processes, and of urging those in other fields of medicine to bear in mind the possibility of a concurrent allergy in pathologic manifestations such as those which I have enumerated. This possibility is to be considered especially in the presence of a positive past or family history of any of the more usual allergies. The facilities for testing for allergy are available to all physicians and the technic is simple, although the interpretation and therapeusis are sometimes highly technical. There is no reason why every physician should not acquaint himself with the proper use of the diagnostic allergy test outfits and use them in his work. With twenty or thirty test substances, he will be able to recognize and eliminate possibly fifty per cent or more of allergic factors.

But I would emphasize at the same time that negative findings after ordinary skin testing by no means rules out an actual existent allergy. This is even true in the frankly allergic diseases, such as asthma, hayfever and vasomotor rhinitis. But if the attending physician can relieve fifty per cent of his allergic cases without requiring further consultation, he will have established a distinct advance. The remainder, in which there is a reasonable assumption of allergy, may require more technical study.

I have said that allergy cannot be divorced from general medicine. This is most certainly true, and I believe that this paper has emphasized that fact. On the other hand, many of the technical procedures, especially in the more obscure cases, such as intradermal testing, opthalmo reaction, dust extraction, passive transfer, secretion filtrate and the like, require a technical and interpretive experience that can only be gained through an unusually intensive study of the problem under consideration.

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Medical Arts Building.

A TALK TO COUNTRY DOCTORS.*

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To the country doctor and the general practitioner we look for the preservation of the rapidly fading picture of that high type of professional figure, the physician who acts as adviser, counselor and friend of the family, a picture which the advent of the specialists is threatening to efface. This three-fold capacity, however, increase the responsibilities of the doctor and demands perhaps rarer acumen, better judgment and a wider outlook on the diagnosis and treatment of disease. By this I do not mean easier recognition of rare disorders but of the more or less common diseases, which, in spite of, or perhaps because of their very frequency, are liable to escape attention and the proper evaluation of their importance.

With this in mind I have thought it worth while to dwell on the significance of some of the chronic digestive disorders referable to the stomach and the upper intestinal tract, and two common acute conditions, intestinal obstruction and strangulated hernia.

I take it that the most frequent complaints which come to the doctor's ears are related to the process of digestion, since the stomach may play the role of announcer of as varied a series of events as the now celebrated MacNamee is called upon to give us over the radio. What to do when a patient complains that "everything he eats goes to his stomach" (which, of course, it would be a bad thing if it did not), and how to interpret that complaint is a question which arises perhaps several times a day in every doctor's office. The acute observer and the man of experience begins to take his mental notes, before the patient utters a word, from his very manner of entering the consulting room. Would that I had the facile pen that can adequately describe the different types of so-called dyspeptics! The resulting word pictures, if embodied in a booklet, would, I am sure, rapidly enter the ranks of the best sellers, the pecuniary rewards of which would far outrank my present professional income. Seriously speaking, however, I believe that the general practitioner should cultivate the habit of observing the general behavior of his patients as they enter his room. He can learn much from the walk, the facial expression, the manner of beginning the more or less woeful recital of his troubles, etc.

Thus the history-taking begins. Its development and proper evaluation belong to the fine arts in medicine. You all realize this, I know, and I am with you likewise in realizing how much depends on the type of patient. But here is where the art comes into play. However, important as this aspect of medicine is, it is not my purpose to talk on the psychology of patient and practitioner. As I have said, I want to try to present to you certain facts in digestive disorders, the more common of which are caused by a chronically diseased appendix, followed in the order of frequency by chronic gall-bladder disease, peptic ulcer and chronic pancreatitis.

It is only necessary to recall the structure of the appendix, composed as it is of much lymphoid tissue, to see why it has justly been compared to the tonsils and to illustrate the susceptibility of lymphoid structures to infection. As infection of the tonsils is the most common cause of sore throat, so infection of the appendix, the abdominal tonsil, is the most common cause of the sore belly. I know that chronic appendicitis has been denied a place as a clinical entity, but this denial does not come from abdominal surgeons of large experience who make many autopsies *in vivo*. We have but to recall the physiology of the appendix and the cecum to see the role pathological physiology plays in causing indigestion or dyspepsia. (See my article on "Chronic Appendicitis," *American Jour. Med. Sciences*, June, 1929, No. 6, vol. clxxvii, p. 749). The appendix, therefore, is the first to be ruled out in the study of the dyspeptic patient, by careful inquiry and careful physical examination, and bearing in mind the many other causes of indigestion, such as movable kidney, visceroptosis, movable tender cecum, ureteral inflammation, stone or stricture, certain tubercular inflammations, or carcinoma of the cecum or peritoneum, tubercular mesenteric glandular enlargement, retroperitoneal lymphangitis, chronic psoitis or psoas abscess, periostitis of the hollow of the ilium, iliac abscess, and, in the female, chronic tubal, ovarian, or tubo-

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ovarian disease, which are all diagnostic possibilities and pitfalls if we are not alert. This is a panoramic view of the situation, every unit of which calls for recognition. Any or all of these conditions may give upper as well as lower abdominal discomfort and make one think the stomach is responsible. To attempt a differentiation of the symptomatology and physical findings of these various conditions would take me too far afield; therefore, I simply mention them so that you may be better able to meet the perplexities of abdominal diagnosis. In order to be able to rule out the appendix as the cause of the trouble, one must be familiar with its different positions so that the findings of palpation will be more certain. With this knowledge, the different points to which pain is referred are better understood. The most common positions of the appendix, as I have frequently pointed out, are lateral to and behind the cecum and colon, in the pelvis, beneath the terminal ileum and mesentery and pointing downward and backward to the left, above the terminal ileum and mesentery and pointing upward and to the left mesial to the cecum and the colon, and anterior to the cecum and the colon.

What I have said of the appendix as a causative factor of indigestion is equally true of the liver and its appendages, especially the gall-bladder. The liver is the bio-chemical laboratory of the body, its chief metabolic center, the great filterer of filth, the center of internal respiration, the abdominal brain, the storehouse for glycogen, and is made up of two kinds of cells, the hepatic and the stellate. It is interesting to note that each hepatic cell, which possibly has more physiological activities than any other cell in the body, is connected by a nerve fiber to the solar plexus, making this region most important from the standpoint of innervation of the abdominal viscera. The stellate or Kupffer's cells are endothelial and belong to the reticulo-endothelial system, acting chiefly as scavengers in removing bacteria and other organisms from the blood stream.

The most common lesion of the upper abdomen—cholecystitis—oftentimes presents vomiting, epigastric pain, hyperchlorhydria, pylorospasm, and atony of the stomach. As a rule, however, disease of the gall-bladder presents certain inaugural symptoms, such as discomfort after meals, especially after rich, fatty foods, gaseous distention and eructations, chilliness after meals, usually after the evening meal, and constipation. The patient likewise is apt to be of a nervous temperament, so that the diagnosis is apt to be the convenient and comprehensive one of nervous indigestion. It is all right to treat these patients' nerves, but remember that the best way to do so is to start with the biliary passages. Here, again, there is the chance for preventive work that will forestall the advance of cholecystitis and the possibility of stone formation with its more or less disastrous sequelae. Fully developed disease of the gall-bladder, especially in the presence of gall-stones, is not difficult to recognize. The syndrome of colicky pain in the hypochondrium, referred to the back and to the right shoulder, relieved by vomiting, either spontaneous or induced, and often requiring morphine for relief, is too familiar to require consideration. The objective symptoms, however, may demand some attention since they are apt to be relegated to the laboratory for demonstration. The history, together with careful palpation, is an important part of the study and should never be omitted. I have always urged this, and I particularly urge it at this moment, because laboratory facilities are not always available in outlying rural districts. I regard palpation by sensitive, trained fingers as the most valuable asset of every doctor. If this sensitiveness is not congenital, it fortunately can be acquired by carefully repeated practice. In disease of the gall-bladder, palpation over the affected area will detect rigidity, tenderness and perhaps the presence of a mass. This mass can usually be felt as the patient takes a deep breath with the mouth open; if the mass seems to move upward on deep inspiration, it can be better made out by having the patient hold his breath for a few seconds. To me, the positive results of this manoeuvre indicate very probable pathology in the region of the gall-bladder. Doubt may arise, especially if the appendix occupies a high position. In such instances cholecystography may be helpful in arriving at a decision, provided the man behind the apparatus and in front of the finished picture is both a good mechanician and a good critic.

Sending these patients to the noted European springs, and prolonged medical treatment, I believe, are responsible for much morbidity, such as hepatitis, cholangitis, pan-

creatitis, etc. I am led to this conclusion by my excursions into the pathological fields of the upper abdomen which disclose hidden secrets.

What I have said of an infected gall-bladder is equally and to a greater degree true of infection of the liver, since disturbed physiology of the liver too often makes for a disastrous future for the patient. If cholecystitis is the result of primary infection of the liver, the earlier it receives attention, the better for the liver; and if the gall-bladder is primarily infected, early attention to it likewise saves the liver.

As to peptic ulcer, its diagnosis would be easy if every case presented the typical syndrome of periodic attacks of epigastric distress or burning pain two to three hours after meals, relieved by alkalis, and almost complete well being between such attacks. But we all know that the sequence of events often varies and may be more or less misleading. A history of indigestion may often be much more suggestive of cholecystitis or chronic appendicitis than of ulcer, and operation may reveal ulcer only. X-ray studies do not always show positive findings and a negative report does not always carry weight. Much depends on the roentgenologist, and there are certain ulcers that are difficult to demonstrate even at operation. Duodenal ulcer occurs as one of two types: the indurated calloused ulcer, visible and palpable and readily demonstrated at operation, and the non-indurated and non-calloused ulcer that can neither be seen nor felt from the peritoneal surface, and, even with the bowel opened, if at all visible, can be seen only as a slight erosion of the mucosa. This type does not show the typical niche of a calloused ulcer; in fact, it is doubtful whether in the hands of the average roentgenologist it will be demonstrable at all. And still the clinical symptoms are those of ulcer.

What about gastric analysis? Again we have wide variants with which to deal. The presence of occult blood in the stools is, of course, significant, but its absence is not decisive evidence against ulcer. Acidity varies greatly in different ulcer cases, although a high acidity is more often found in the typical ulcer than not. The fact, however, that acidity is also found in cases of chronic disease of the gall-bladder and of the chronic appendix, although not in the same proportion, takes away something of its diagnostic value. While it is not always convenient for the country doctor to have these tests performed, he should have them done whenever possible, for these studies, if made by him who sees the patient first, are valuable both to the doctor and to the consultant. Keen observation and methodical recording and reporting of early symptoms contain the greatest promise for furthering that preventive work which is the aim of our profession; and it is the general practitioner who has the opportunity to make this valuable contribution to medicine and, incidentally, of course, to surgery.

How to diagnose and treat these duodenal ulcer patients is one of the very trying questions that confronts the practitioner. One of the difficulties in diagnosis in the absence of a definite history, and even in its presence, is due to the similarity between the symptoms of ulcer, gall-bladder and chronic appendicitis, especially if there is jaundice. The symptoms of ulcer, however, if of long standing, are more definite. There are intervals of betterment with frequent recurrences. But the kind of food ingested does not play the same role in ulcer as in gall-bladder and in chronic appendicitis. X-ray study in the absence of a definite niche or crater is not particularly satisfactory. The deformity of the duodenum, due to pericholecystic adhesions and the adhesions resulting from a high-lying appendix, makes differential X-ray diagnosis an impossibility in the absence of more concrete evidence. It may be difficult for some of you to understand the symptoms of jaundice occurring in this connection. This is, however, made easier when we recall that the lymphatics of the gall-bladder are in communication with those of the liver and of the duodenum and that by a reversed lymph current infection can be carried into the liver and, as a consequence, cause cholangitis and jaundice.

The physical examination in duodenal ulcer is of little if any help except in the large calloused ulcer with much peri-ulcerous exudate, when deep pressure over the upper part of the rectus muscle may cause tenderness. The most serious type of duodenal ulcer from the standpoint of risk to the life of the patient is the bleeding ulcer. I know from experience that patients do die from hemorrhage. I know also that text-books teach that this rarely oc-

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curs, but I wonder if the diagnosis of duodenal ulcer in these instances was correct.

The two conditions in the absence of an ulcer history that are difficult to differentiate from bleeding ulcer are bleeding in early Banti's disease and ulcerative perforation of an œsophageal varix. I have experienced this difficulty when the diagnosis was only proven by inspection and touch.

Duodenal ulcer of long standing frequently causes pyloric obstruction which formerly was regarded as always due to gastric ulcer. The revelations of the aseptic scalpel in the study of the pathology of the living have shown that duodenal ulcer is a distinct factor of pyloric obstruction in practically all instances. May not this raise the question as to whether or not it would be better for books on internal medicine to be written at the side of the operating table rather than in the study of the doctor?

In the differential diagnosis of duodenal ulcer, both duodenitis and inflammation of a duodenal diverticulum may also confuse the diagnostic picture.

Another point that interests me, and I am sure will interest you, is the question, do duodenal ulcers ever heal? This looks doubtful in a percentage of cases at least; otherwise, there would not be recurrences, and, in another sense, it is doubtful in that in our laboratory we have yet to find a duodenal ulcer that I have excised where there has been complete healing—in other words, complete epithelialization.

The treatment of ulcer is that usually outlined by the internist—alkalis, diet and so forth. My one comment is that if after a reasonable length of time the patient's condition is not satisfactory to him and he has had one or two recurrences, operation should be resorted to.

A word as to gastric ulcer! As you are probably aware, there was a time when gastric ulcer was considered more common than duodenal. This delusion has been dispelled since Moynihan's classical treatise on duodenal ulcer. This author later on showed also that many supposed gastric ulcers can be traced to that tricky diverticulum at the end of the cecum. The appendix may cause hunger pain, pylorospasm, and sometimes haematemesis. In the clinical differentiation between gastric and duodenal ulcer, it is well to remember the sequence of events: first, that the post-prandial distress of gastric ulcer appears earlier and that the cycle is food, comfort, pain, comfort; while in duodenal ulcer it is food, comfort, pain. In other words, the pain in gastric ulcer wears away after the comfort obtained by food, while in duodenal ulcer it persists until more food is taken.

In passing, I may say that for the demonstration of ulcer in the stomach the X-ray has "pride of place," and in competent hands is second only to the surgical demonstration of the lesion.

Gastric ulcer stands out as particularly prominent on account of the risk of undergoing cancerous change and therefore calls for earlier and more radical operative measures than does duodenal ulcer. In our experience in the Lankenau clinic, cancer is engrafted upon gastric ulcer in thirty-five per cent of our cases.

Now, as for chronic pancreatitis, the latter is so often associated with disease of surrounding organs that it is difficult to separate the symptoms due to the accompanying disease and those due to pancreatitis. There are no pathognomonic symptoms of chronic pancreatitis. Of course, disease of the bile-ducts, particularly the common duct, suggests the probable presence of pancreatic disease, although the symptoms referable to each condition cannot be differentiated.

In diagnosing pancreatitis, particular attention should be paid to a history of previous gastro-intestinal trouble or habits of eating and drinking, which usually are associated with cholelithiasis. If disease of the bile-ducts and gall-bladder has preceded the pancreatic inflammation, the early history presents the symptoms of that disorder, with perhaps frank attacks of biliary colic.

The symptoms usually associated with chronic pancreatitis are pain, often referred to the back, nausea, vomiting, constipation, icterus, slight fever and loss of weight. These, however, are common to various other upper abdominal diseases and do not of themselves, even when all are present, constitute a characteristic symptom-complex. The pain in chronic pancreatitis has no definite relation to eating, drinking, or any particular food—a point of possible value in the differential diagnosis from gall-stone disease, gastric or duodenal ulcer. The pain is not constant

in character, position or radiation, nor distinctive enough in any way to differentiate it from the pain of other abdominal diseases.

In mild cases of chronic pancreatitis where the diagnosis is extremely uncertain, medical treatment is in order, especially if improvement occurs. It is not improbable that many of the so-called "stomach complaints," catarrh, etc., are mild cases of pancreatic lymphangitis that recover. But it is a mistaken policy to delay surgery too long, especially when the diagnosis of the usual underlying biliary complaint is certain, since chronic pancreatitis, when once it has reached the stage of fibrous deposit, cannot be cured, although the further progress of the disease may possibly be arrested by timely operation. Surgical treatment of chronic pancreatitis aims at the removal of the underlying cause, prevention of further involvement of the pancreas, and relief of the pancreatic disease present, by drainage of the common bile duct.

Thus far I have spoken mainly of the more common chronic conditions which come to the ken of the general practitioner. I should like to say a word about two acute conditions often met with: acute intestinal obstruction and its next-door neighbor, strangulated hernia.

It is no exaggeration to say that there are few conditions that call for the quick thought and action demanded by an acute abdominal crisis. Here, again, the general practitioner, especially in the rural districts, has the chance of showing his mettle and gaining his medals.

My reason for selecting acute intestinal obstruction and its allied condition is because of the high mortality of both, especially the former. While I believe that in so serious a condition a comparatively high mortality is to be expected, I feel reasonably sure that this could be materially reduced by prompt diagnosis and prompt surgery. There is every evidence to show that the death rate increases in proportion to the time elapsing between diagnosis and operation; or, as someone has aptly remarked, "The longer a patient lives before operation, the sooner he dies after operation." I say here is the doctor's chance. The early symptoms are the important ones, and the family doctor is the first to see the patient whose life depends on prompt recognition and treatment. Everyone can recognize the late symptoms, which may well be called the too-late symptoms and which too often mean death.

Acute obstruction occurs in one previously well who is suddenly taken with most severe paroxysmal abdominal pain, followed in a short time by nausea and by vomiting of the gastric contents, and later of the contents of the upper small intestine. Physical examination of the abdomen is most important and reveals exaggerated peristalsis, that is, peristalsis coming in waves and subsiding with the subsidence of the paroxysmal pain. The temperature and the pulse rate are normal. Immediate operation under the above conditions is the only course that is logical and life-saving.

Primary, as distinguished from post-operative, obstruction is most often due to a complication of the disorder to which the male is so peculiarly susceptible—hernia, acute intestinal obstruction's first cousin, which is more easily recognized because it presents a protrusion at one of the hernial orifices; namely, the inguinal canal, the umbilicus, the saphenous opening, the end of the femoral canal. Strangulated hernia is an irreducible hernia, differing from the ordinary irreducible hernia in that the latter causes interference only with the fecal circulation, while in strangulated hernia both the fecal and the blood vessel circulation are obstructed. Ordinary irreducible hernia may not require immediate operation while strangulated hernia positively does. These patients are too often subjected to repeated taxis. This, as I see it, is a most harmful measure. If the hernia does not go back when gently pressed upon, it should be immediately operated. Taxis invariably results in hemorrhage into the wall of the bowel and into its mesentery, and in many instances has been the cause of gangrene, entailing a much more involved operative procedure than would have been required had taxis never been made.

Post-operative obstruction is most often due to adhesions. Here the presence of an abdominal incisional scar should suggest the diagnosis. In either case one may sometimes be misled by the fact that the patient has had one or two bowel movements. This merely means that the bowel below the obstruction has emptied itself. But important as the history is, it is the physical examination—observation, auscultation, and palpation—that is decisive.

As I have already indicated, the usual se-

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quence of intestinal obstruction is pain, vomiting, constipation and distention. The pain is intermittent, going and coming with the peristaltic waves as the bowel contents try to get past the obstruction. This is a very valuable sign. In fact, diagnosis can sometimes be made on this one feature. Vomiting is a constant feature. It sets in earlier and is more persistent when the obstruction is high than when it is low down in the intestine. At first the vomitus consists of stomach contents and later of mucus, bile, and, finally, brownish, malodorous fluid, or the stercoraceous regurgitation of the contents of the small bowel. To wait for actual fecal vomiting, as, unfortunately, often is done, is disastrous.

Distention varies with the site of the obstruction, being less marked in high than in low obstruction. On the other hand, toxic signs appear earlier when the obstruction is high than when it is low; this, like fecal vomiting, is an ominous sign.

An important diagnostic item is the typical constipation, or rather obstipation. Purges should, of course, be avoided. Enemas may be given, but if they fail to obtain results, or if a successful enema fails to relieve the pain, etc., we know that the obstruction has not been overcome. But one must not be misled by the fact that small particles of fecal matter and gas are expelled. The former may be remains of fecal material, and the latter may be merely the air that has been carried in with the injection of the enema.

If, fortunately, the diagnosis is made while peristalsis is still active, the prognosis is correspondingly good. The silent or tinkling belly usually is a hopeless sign. The earlier the operation, the less the surgery, and the later the operation, the more the surgery and the nearer the patient is brought to the gates of the hereafter.

A pre-operative measure of value is gastric lavage. This reduces the distention and vomiting, and if, as may happen in rural districts especially, the operation has to be delayed, dehydration can be prevented by hypodermoclysis or enteroclysis. Morphin may be given to alleviate the pain. Intravenous injections of glucose in normal salt solution may be indicated. Research in this important subject has shown the importance of maintaining not only fluid but also chlorids. The latter are given in hypertonic 2-5 per cent solutions.

Wherever possible, spinal anesthesia should be used at operation. What to do at operation will depend on what nature has done before the operation. The only point to which I would draw attention is to cleanse the hernial sac before relieving the constriction. If the latter is not done and the sac contains vicious organisms, the risk of a peritonitis from contamination is a possibility.

The result of the operation will depend on the acumen of the diagnosing physician; team work before the operation; the judgment and skill of the operator; and, finally, on team work after operation, careful nursing, etc.

1830 *De Lancey Place.*

EXTRADURAL HEMORRHAGE.*

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One of the most serious conditions which may arise in connection with fractures of the skull, or head injury, is an extradural hemorrhage. It is one of the great emergencies of cranial surgery, and should always be thought of whenever a patient is examined for even a slight head injury. It is hoped that this paper may bring out certain points which will enable an early diagnosis and operation in these cases.

As the term, extradural hemorrhage, implies, the hemorrhage occurs on the outside of the dura, or between the dura and bone. It is caused by rupture of one of the branches of the middle meningeal artery, or probably of a venous sinus. It is associated with trauma to the head, and nearly always there is a fracture of the skull present, which causes laceration of a vessel. The clot which forms is usually in the temporal region, grows more or less rapidly and produces compression of the brain. The relative frequency of this condition as the cause of death in fracture of the skull may be obtained from a review of the literature. Vance[1] reported a series of 507 cases of fracture of the skull which came to autopsy, and 61, or about 12 per cent, had an extradural clot which weighed on an average of 122 gms. This was considered to be of sufficient size to produce death. Le Count[2] and Apfelbach, in a series of 504 cases, found 104, or about 20 per cent, with extradural clots large enough to produce death. The frequency then of extradural hemorrhage, as reported in

*Read at the sixtieth annual meeting of the Medical Society of Virginia, in Charlottesville, Va., October 22-24, 1929.

these two large series, would appear to be between 12 and 20 per cent.

In a clinical study of 223 cases of fracture of the skull by Carter,[3] there were nine cases of proven extradural hemorrhage. One was discovered at autopsy and the rest were disclosed at operation. Of these, six cases recovered and three died. Moody[4] reported 100 cases of extradural hemorrhage in a series of 908 cases of fracture of the skull, and he states that sixty-three were diagnosed clinically; thirty-seven were operated upon, and twenty-six of these died.

In this present report, there were seventeen cases of proven extradural hemorrhage which came under my observation: sixteen were operated upon, with three deaths, and one was diagnosed clinically but died before operation could be performed. The diagnosis was confirmed at autopsy. The hemorrhage occurred on the right side in five of the cases and on the left in nine. The only satisfactory explanation of this is that all of the hemorrhages caused by baseball injuries occurred on the left side. An attempt was made to determine the relative frequency of a clot in the different locations in the temporal and occipital regions, which may give information as to the source of the bleeding. Seven were found in the posterior temporal, or temporo-occipital, eight in the mid-temporal and three in the anterior temporal region. These findings were in accordance with those of Vance and Le Count, in that the posterior branch of the middle meningeal artery is most frequently responsible for the hemorrhage.

In nearly every case of extradural hemorrhage there is an associated fracture of the skull. The fracture may be linear or comminuted, and it is the sharp edge of the bone which ruptures one of the middle meningeal vessels or a venous sinus. The blood escapes and clots between the dura and bone at the site of the ruptured vessel, and a gradual compression of the brain occurs. Hemorrhage from the large branch of the middle meningeal artery may cause rapid compression of the brain and early death. On the contrary, bleeding from one or several small vessels may produce compression of the brain over a longer period of time, and death may not come for several days. It has been shown by Wegefarth and Weed[5] that the pressure in a large dural sinus is lower than that of the cerebrospinal fluid in an intact skull. Then it would seem illogical that a hemorrhage could occur from a sinus with sufficient force to strip the dura from the bone and cause compression of the brain. It is a known fact, however, that the pressure in the venous sinuses is increased considerably under certain conditions, such as vomiting, coughing or straining. These symptoms, which are frequently associated with fracture of the skull, may be partly responsible for the hemorrhage when there is a rupture of a sinus.

It was observed in a few cases at operation that the clot was posteriorly located and the bleeding came from the region of the lateral sinus or one of its tributaries. Clots overlying the lateral sinus have been shown at autopsy as undoubtedly due to a rupture of the sinus wall. These posterior clots are not tolerated as well by the patient as those which are placed more anteriorly. This may be due to the fact that the pressure from behind is more directly upon the vital centers.

Sometimes the diagnosis of extradural hemorrhage is suggested by the nature of the injury. It is not unusual to obtain a history in which there was a relatively trivial blow on the head, as from a short fall, causing the patient to strike his head upon the pavement, or a blow on the head caused by a pitched baseball. The skull is sometimes very thin, and a relatively light blow is sufficient to produce a fracture. The age of the patient may play a part in the etiology. The largest number of cases in our series occurred in the third decade. A possible explanation of this is that in the young or aged, the dura is more firmly adherent to the bone. In such a case, if the dura should be ruptured, the pressure of the bleeding may not be sufficient to strip the dura from the bone. Vance and Le Count also found extradural hemorrhage to be more frequent in the third decade. The youngest patient in our series was two years of age. He had an extradural hemorrhage caused by a fall to the pavement while at play, without primary unconsciousness. While extradural hemorrhage is usually associated with light blows to the head, it may also be found in the most severe head injuries.

The clinical picture presents a syndrome which is generally easy to diagnose in a case of typical extradural hemorrhage. The history of an apparently trivial blow with pri-

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mary unconsciousness of short duration, followed by a period of consciousness, or the so-called "free interval," and later stupor and unconsciousness, makes the diagnosis almost certain. During the stage of consciousness, when the dura is being stripped from the bone by the clot, there is most severe headache. The patient frequently tosses about in the bed and holds his head because of the severe pain. This sign is usually so typical that the diagnosis may be strongly suspected. Another fairly consistent finding is the slowing of the pulse rate, which is frequently as low as 40 or 50. There are exceptions, however, and occasionally we see a patient with a normal or accelerated pulse rate. The slowing of the pulse is a more constant finding than an elevation of the blood pressure. Only about half of our cases showed any elevation of blood pressure. This is probably due to the fact, as Cushing[6] has shown, that the intracranial pressure must equal or exceed the blood pressure before any considerable elevation of the latter occurs. Vomiting usually occurs during the progress of the cerebral compression. In addition to these general pressure symptoms, there may be focal signs. In our own experience, as well as that of Holman[7] and others, the dilated pupil on the same side as the hemorrhage is one of the most important signs of local compression. In a recent paper[8] before this society, this point was discussed in connection with extradural hemorrhage. Equal pupils do not exclude a hemorrhage in an early case. Likewise, unequal pupils do not always mean an intracranial hemorrhage. The inequality may be fleeting and soon followed by bilateral dilatation, and this unilateral dilatation may not be recognized unless frequent observations are made. Cushing[9] states that the dilatation is preceded by a temporary contraction of the pupil on the same side as the hemorrhage. In one of our cases there was a contracted pupil on the same side as the hemorrhage. Other focal signs may be paralysis or reflex changes on the opposite side. Paralysis is a fairly late sign and usually does not occur unless the compression reaches a high degree and involves the motor area. If the hemorrhage occurs on the left side, some degree of aphasia may be expected from pressure upon the temporal lobe.

The whole clinical picture may be confused in the severe injuries, especially the ones with intradural damage, such as contusion or laceration of the brain and subdural hemorrhage. We frequently see in our cases of fracture of the skull a severe contusion and laceration of the brain on the opposite side from contrecoup injury. There may be extradural hemorrhage on the same side as the fracture, with severe contusion or laceration of the brain on the opposite side. In such a case there may be a hemiplegia on the same side as the extradural clot. It is usually safe to follow the dilated pupil in determining the side on which to operate. Rand[10] reported a series of cases in which the dilated pupil was on the same side as the hemiplegia. He operated on the opposite side to the hemiplegia and found later that the hemorrhage was on the same side as the dilated pupil. Examination of the eye grounds may give very little help. They may show some dilated and tortuous vessels and slight blurring of the discs, which are signs of increased intracranial pressure. It is best not to follow any one sign in reaching a conclusion, but the whole clinical picture should be considered.

The treatment is immediate operation as soon as the diagnosis is made. There is probably no greater emergency and none that will tax the skill of the surgeon more than a successful termination of a case of extradural hemorrhage. The operation can usually be done under local anesthesia, as the patient is generally stuporous or unconscious. Frequently he will rouse up after the clot has been removed and seldom a light general anesthetic will be necessary. The opening is made in the temporal region like that for a subtemporal decompression, or slightly posteriorly if the clot is suspected in this location. Some clots may be encountered between the temporal muscle and bone from escape of the blood through the fracture. As the bone is exposed, a bluish discoloration will indicate the clot lying underneath. When an opening is made in the bone, the clot extrudes. It is best not to begin removal of the clot until all of the necessary bone removal has been done, as active bleeding is started as soon as the clot is dislodged, and this will entail an unnecessary loss of blood. One portion of the clot may be dark and firm, and another bright red from a more recent hemorrhage. The clot should be removed a little at a time, and the bleeding points controlled with a ligature or a muscle graft. This will help to conserve the blood. As additional portions of the

clot are removed, more bleeding points are found and controlled, until the entire clot has been removed. It is extremely difficult to do the operation well without the proper equipment. One important thing is sufficient illumination. The electrically-lighted spatula, used in ganglion operations, is almost indispensable in our experience in locating the bleeding points away from the opening. Frequently there may be profuse spurting of blood from a ruptured trunk or branch of the middle meningeal artery. In this event the blood will obscure the field and prevent a successful ligation. I have found it helpful to have an assistant press firmly upon the carotid artery on the same side, until the ruptured vessel can be ligated. Usually a muscle graft will be sufficient to stop the bleeding from the venous points or in places where a ligature is not convenient.

Sometimes the bleeding is so profuse and the loss of blood becomes so alarming that it will be necessary to leave a gauze packing in the wound to control it. We have seldom had to pack, and it should be used only as a last resort, since it may cause some compression within itself. In our experience the cases that required packing have done poorly until the packing was removed. It should be removed the fourth or fifth day or earlier, if the patient is not doing well. Plenty of time should be taken to control the bleeding so as to leave a dry field. A rubber tissue drain is advisable for one or two days. As a rule it is not necessary to open the dura, as there is usually no intradural pressure after the clot has been removed. Indeed, there is more or less a large cavity left and it is a problem to obliterate it so that additional clots may not accumulate.

The prognosis will depend upon an early diagnosis and prompt operation, with removal of the clot and control of the bleeding. Reports in the literature give a high mortality, usually about 50 per cent, even in the cases operated upon. Without operation, naturally the mortality would be 100 per cent. We have been successful in saving thirteen of the seventeen cases in our series. As stated before, sixteen of these cases were operated upon and one of the cases died before operation could be performed. This case illustrates the importance of an early diagnosis, as the patient may go into coma and die while the operating room is being set up.

Conclusions.

1. Extradural hemorrhage is the most serious emergency requiring operation in a fracture of the skull.
2. It usually follows light blows to the head in young adults, although it is not infrequent to find it associated with contusion and laceration of the brain and subdural hemorrhage.
3. The most important signs in the diagnosis are the dilated pupil on the same side as the hemorrhage, history of a "lucid interval," severe headache during the period of consciousness, slowing of the pulse rate, and probably an elevation of the blood pressure.
4. Prompt operation under local anesthesia with removal of the clot and control of the bleeding is necessary to save life.
5. Seventeen cases are reported with four deaths. Sixteen of these were operated upon, of which three died.

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Professional Building.

PRESIDENT'S ADDRESS TO THE SOUTHWESTERN VIRGINIA MEDICAL SOCIETY.*

By A. M. SHOWALTER, M. D., Christiansburg, Va.

Fellows of the Southwestern Virginia Medical Society:

This being the first opportunity presented, I trust even at this late date you will accept my sincere and deep appreciation for the very high honor conferred upon me when I was elected by you to the very responsible and distinguished office of president of your society. Words are inadequate to express my appreciation

*Address of the President before the Southwestern Virginia Medical Society, at Galax, Va., September 16-17, 1929.

tion and gratitude for the many courtesies and privileges accorded me by the fellows of this society, and I shall always remember with pleasure the many happy experiences of the year just past. Not only with pleasure do I recall the events of the past, but also with a degree of satisfaction and pride, for the experience has to me been both profitable and interesting, and I trust you may be able to say the same thing. Again, therefore, as far as words can convey human sentiment and human appreciation, let me thank you for the confidence reposed in me. With the hope that in some way I may have measured up to the very high *ideal* which I am sure you hold for the highest office in your power to bestow, it may not be inappropriate to bear the following thought in mind:

"Success is being friendly, when a fellow needs a friend,
It's in the cheery words you speak and in the coin you lend.
Success is not alone in *skill*, and deeds of daring great,
It's in the flowers you plant beside your garden gate."

If, therefore, I have measured up to this standard of success to even a slight degree, I shall feel profoundly thankful.

In connection with matters of interest to our Society, my attention has been called to the fact that we now have on hand in our treasury approximately $1,000.00 in cash, which it does seem to me should be used for some definite and specific purpose, and to this end may I hope the Executive Committee will make some recommendation to the Society for some definite action.

Another matter which I regret very much it is necessary for me to mention is the fact that, of our 172 members, we still have thirty-eight who have not paid their dues, in spite of the fact that notices of this have been sent out every month for the past year. If you consider the cost in time and material to send out these notices it is a considerable item of trouble and expense, and yet as far as the individuals are concerned it would mean little to any member of the Society to send a check one time as well as another. May I urge upon the members of this Society particularly that they give the Secretary a little better co-operation in this respect, with the assurance their efforts will be very much appreciated on his part.

Needs and History of Southwestern Virginia Medical Society

The increased responsibilities thrust upon us as citizens, each year that we live, emphasize more and more the necessity of organization in every branch of human activities, because of the fact that not only in union is there an increase of individual strength but for the further reason that *co-operation* and *team work* are, and should be, the keynote of our very vital existence in the particular age in which we live.

Medical men and medical problems are no exception to the general rule. Starting with a few men in the beginning and gradually working its way up to the top, with the usual ups and downs confronting societies of this kind, we stand today as a medical society, the largest from a standpoint of membership, and unquestionably the most *important* medical society in the State of Virginia, next to our own State society. We have today a membership of 172 medical men, standing at the top of the ladder of professional proficiency, whose ability and integrity has seldom been equaled and never surpassed in the history of medical affairs, and the number is being increased annually at a rapid rate.

Our society has always emerged from every storm through which it has passed, as a result of the personnel of its membership, a bigger and stronger institution for good, until today we represent a force and power in the community in which we live, never before enjoyed by this or any other society. May we not, therefore, hope, as we expectantly believe, that our future will be brighter, more efficient, and more glorious than the past, just as each star in the great firmament of Nature seems to outshine with its brilliance and lustre the ones we have viewed before. So we may look to and anticipate what the future may bring forth with its honors and responsibilities, its joys and sorrows, and, by a comparison with the past, picture to ourselves for a moment what may be some of the duties of the future, and what the privileges. Perhaps no other one thing resulting from medical society associations may be considered as valuable as *contact relationship*, which tends to develop *fellowship* one with another and *friendship* for all, bearing in mind the great truth uttered by the poet, when he said:

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"The finest business in the world is that of making friends;
No investment on the street pays larger dividends."

Certainly no other school or educational institution can be said to offer as valuable a course of practical education as that afforded by the associations of a good medical society, composed of good and valuable men in the community in which it exists. From a standpoint of duty may our resolutions for the future be a determination to see that the reputation of the Southwestern Virginia Medical Society may be kept pure and unsullied, and may the "sunlight of honor and renown, delight to linger and dwell amid her venerable branches."

Aims and Objects of a Medical Society

What, then, should be some of the fundamental aims and objects of a medical society, and what the purposes and privileges of this particular society? The fundamental aim and object of this organization, like all others of a constructive nature, is and should be the making and developing of more valuable and serviceable *men* from our membership as well as mankind in general, with whom we come in contact, both as *physicians and citizens*, for a good physician and a bad citizen are just as incompatible and as much an impossibility in one human being today as in the days of Pythagoras, Hippocrates, Aristotle, and Galen, 2,000 years ago, or, more recently, in the age of Pasteur, Lister, Oliver Wendell Holmes, and Semmelweiss. The outstanding character of all times to call attention to and emphasize this point was Hippocrates, which he did with every degree of emphasis in his various writings, and which writings have been given the stamp of approval by every generation of reputable and noteworthy medical men from that day to this. Hippocrates had little to say about the scientific side of medicine compared with the emphasis he placed upon the evenly balanced education and development of a man, both from a moral standpoint as well as from a scientific standpoint, as a proper *prerequisite* for the successful practitioner of medicine. The great Arabian physician, Rhazes, an outstanding character of the ninth century A. D., also called attention to the same line of thought and responsibility, emphasizing the need of certain worthy qualifications for physicians outside of their scientific knowledge, though at that time it was distinctly understood that *little* was to be *expected of* the *surgeons* or their accomplishments. For instance, from his writings we gather this statement: "Among those factors which make the people turn away from the *intelligent physician* and place their trust in *imposters*, is the delusion that the physician knows everything and requires to ask no questions. If he inspects the urine or feels the pulse, he is supposed to know what the patient has eaten and what he has been doing. This is lying and deception, and is only brought about by trickery, by artful questions, and speech through which the senses of the public are deceived," etc. May we not ask ourselves the question, if this condition of insincerity does not exist to an extent or degree with us today, and, if so, what a wonderful opportunity for a medical society to use its influence for the correction of such irregularities, thereby helping to stamp out and destroy the chief source of *food and support for* the *quack* and *charlatan*, and at the same time bring into being a group of men as physicians, who can indeed and in truth measure up to the poet's definition of a "true man," when he said:

"This is the kind of man was he,
True when it hurt him a lot to be;
Tight in a corner, and knowing a lie
Would have helped him out, he wouldn't buy
His freedom there in so cheap a way,
He told the truth though he had to pay."

It seems to me we, as physicians, are suffering more from lack of a public confidence, without which we are definitely and permanently handicapped, on account not so much of lack of faith in our technical or professional ability as on account of lack of faith in us as men and as citizens. In other words, to accomplish what we all wish and desire as men and as real physicians to accomplish, we must lay the foundation for a public faith in our reliability as well as our ability. We must learn to respect our profession, whether we respect ourselves, families and friends or not. We must bring ourselves to realize the fact that we are not judged by the same measure as we would be perhaps in some other vocation or profession, and, consequently, the responsibility of so-called citizenship is materially increased because you and I are *doctors of medicine.* No amount of *scientific knowledge* will avail us anything, or the world at large anything, unless we can make the

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proper *contact* through our *personal qualifications*, any more than an electric light can burn if the wires are broken and *contact* is unestablished or interrupted. The laws of the land in which we live take cognizance of this fact and hold certain people liable to a greater extent, on account of their professional relationships, than they do others. And so, whether written down in the codes of the common or statutory law of the land in which we live, or not, it is written indelibly on the minds of the people who make the laws of this country and to whom we are held liable and to whom we must render an account of our stewardship. I once heard a prominent man say when speaking before a body of young medical men, that "Tact and good manners in a sick room were of more value to a physician than all the scientific knowledge anyone would ever obtain," and Oliver Wendell Holmes once said to the graduating class of the medical department of Harvard University on the subject of "Suppressa Vera," that members of the medical profession as a rule were the most efficient liars of all other professional memberships. Robert Ingersoll, speaking of the comment that Shakespeare must have been a physician, once stated, "I do not think he was, because he knew too much; his generalizations were too splendid; he had none of the prejudices of that profession in his time."

Sir Astley Cooper once described the medical profession as founded on conjecture and improved by murder. These quotations, of course, are merely made to remind you of what some of the real thinkers of the past have said about the medical profession, and are considered at this time by way of an inventory idea as to the extent of their correctness, or the reverse.

Now, with this prelude, may I ask your indulgence and co-operation for a short time while as we consider the real gist of what I desire to say to you, which, for want of a better term, I have defined as the *Non-Technical Assets* of the medical profession.

Professional Collateral or Non-Technical Assets

We as physicians today are living through a period of time unlike any other through which the world has passed, as no two periods of time are ever any more alike than any two individuals. We are passing through what has been termed an evolution, if you will pardon a much-abused and over-used term, from the period of almost complete darkness and obscurity as far as causes and cures for diseases are concerned, to a period of time when we are just beginning to catch a glimpse of the dawn of the day of enlightenment, when the real causes and the real cures for diseases will be known and practiced; and then, indeed, the exact and specific methods of dealing with sick people will be a pleasure as compared to the inexact and unspecific methods at hand today. As we ourselves are passing through this evolutionary period and trying to adjust ourselves, so also we have the problem of helping our patients to adjust themselves to being treated by specific remedies in the one case, and symptomatic or experimental remedies in the other, and at the same time maintain a degree of faith and confidence consistent with a goodly percentage of recoveries; for, argue as you wish to the contrary, faith born of confidence is, as you well know, one of the most valuable remedies we have at our command in all of those diseases which we treat by so-called symptomatic methods. Is it not natural, therefore, and at times apparently almost justifiable for us to claim those very *untenable* claims, which our patients would like, through ignorance, to pin their faith to, with reference to the various therapeutic means we have at our command, rather than stick religiously to the doctrine we are taught in our schools of instruction, that *honesty is the best policy!* Is it also any wonder that the average layman has difficulty this day and time in making that proper distinction between a well-trained, conscientious practitioner of medicine, and one who takes advantage of the so-called ignorance and gullibility of his patients, based upon the facts of his inheritance in the faith of the fathers as pertains to the treatment of human diseases! Now, if this is the case, may it not be possible for us to inspire the mind of the public to a degree of faith and confidence, more readily by indirect than by direct means?

As we take a cross-section view of ourselves or our medical associates and inventory our assets and liabilities, do we ever stop and ask ourselves the qusetion, like the greatest Teacher of all times asked of those about Him, "Whom do men say that I am?"—and then stop and consider what the answer would be? If so,

what is the answer, and what is the ultimate conclusion we come to? Do we ever stop and take an inventory of ourselves, and compare our assets and liabilities, just as every business concern takes an inventory of itself to determine its standing from a standpoint of assets and liabilities? If so, what do we find to build up and elevate more than any other? Is it our professional or technical knowledge, or is it something else which we may, for want of a better term, define as professional collateral? There are many men today, and I doubt if there is anyone under the sound of my voice who cannot recall characters of this type, who are *rich in professional knowledge* and *bankrupt in* those *personal qualifications* which are necessary to that contact which is so essential to success in a professional way, and who are, therefore, passing through this life complete failures as a result thereof.

The frequency with which we hear subjects of a technical nature discussed and the volumes of literature that are being published apropos of the same subjects, has inclined me to a discussion of a so-called side-line subject, for I implicitly believe that no amount of scientific knowledge will be of any value to us unless we can bring it into action, any more than the millions of dollars worth of electric current now going to waste in our streams of water will continue to go to waste, and so be of no value to us, until we harness it up and make the proper contact.

Therefore, it seems to me, by way of suggestion or constructive criticism, if you will pardon a much abused term, no better subject may be considered today than the so-called professional collateral or "side-line" knowledge and practices, which it is necessary for a physician to have in order to put into play the professional resources he may have. And especially does it appear to me to be of importance today because it seems only fair to say that the best remedy for some of the ills incident to the successful practice of medicine is the use of the side-lines of our natures and less of the scientific. In other words, if we can get *under the skin*, so to speak, of the people generally, by any means that is not unjust and unfair, until you have the confidence and good-will of the public, then it is easy enough to apply your scientific knowledge. Would not a careful consideration of this idea save each of us many unfortunate experiences, and would it not save each of our friends, or a great many of them, the embarrassing predicament of being victims of the gold brick charlatan who lives like a parasite upon the ignorance of its victims? The most of us tend to lose patience with our patients when they fail to realize the significance of our scientific knowledge, and, therefore, we lose patients for lack of patience, at a time when we need them most. Did you ever stop and compare the contact relationship of a physician who has successfully practiced medicine for thirty years with a young man just out of a medical school, or, worse still, just out from a few years of hospital experience, when the most of us really know (?) more than at any other period of our lives, that we really and truly are wiser than the rest of the world? Is this not a fact as well as a human tragedy? Think of the story of the doctor's reply to a young nurse when she said to the aged M. D. about one of their patients, "Doctor, these people are such fools." The physician replied, "Sh, if there weren't a lot of fools in this world, you and I would starve to death,"—an exaggeration of a great truth.

Patience! How far does anyone ever get without it in life, and how little of it do we have or practice when we first start on our medical careers? How far does lack of it go in driving the public to the quack and the charlatan, and what a wonderful stepping stone it is also to that greatest of all human faults and human frailties, *inconsistency*, which in itself is an absolute bar to success in any profession or calling that may be termed fair or decent! Did you ever stop and analyze the reply of the average physician to a so-called ignorant or at least innocent layman who asks about certain patent medicines? And see, perhaps, how quickly and forcefully, and without due process of courtesy or reasoning, he, the physician, will denounce a patent medicine just because it is a patent medicine; and then did you ever stop long enough to look on the shelves of these self-same physicians and see what a percentage of them have patent medicines in use in their families if not for their own benefit or detriment? Did you? If you haven't, go out and look the world over, and you will find one of the rational answers to the why and wherefore of the so-called *cults* and vicious practices that we have to contend with today, and at

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the same time one of the fundamental reasons for the lack of public confidences, which we hope to enjoy, and which, if we had, we could legislate against infectious diseases over-night in a way that would save hundreds of thousands of human lives annually. We would thus turn the tables on the quacks so quickly they would pass out of existence so rapidly another generation wouldn't know they had ever existed, save from a theoretical knowledge of history. *Patience* and *consistency*, then, gentlemen, should be the watchwords of our lives, not only as physicians, but as citizens of this country in which we live.

Again, let me repeat that with the wonderful contributions of a scientific nature that the medical profession has made during the past, the vast amount of knowledge they have acquired, and the wonderful amount of *confidence* and *fear* as well as respect the world has for the medical profession, if we could only bring our collateral up in keeping with the scientific side of our lives, we would, as the slang phrase expresses it, have the "world by the tail with a downhill drag." And, after all, is the world not right in this requirement? Ought not the greatest and most important responsibilities in life be entrusted to the greatest and truest and finest examples of citizenship? Is it not well to realize the fact that we should respect the profession of medicine with a greater degree of responsibility than we respect even ourselves, and refrain from doing some things because we are doctors of medicine, rather than because we are members of a certain social class or standard? Have you not often wondered, just as I, to what extent our viewpoint in this respect has been molded by the ideals and associations around our own medical colleges? Is it not a good idea to take an inventory of our faults as well as our accomplishments in life occasionally, and see to what extent the sheet of our lives balances? But you may say, this is an ideal, and one that cannot be worked out in a practical way. Is it, or not? How about the *honor system* in the practice of medicine as well as in our medical schools? We go through our colleges respecting and studying and boasting of the *honor system* by which the affairs of the school are run and maintained, and seem to place on the shelf of the most concealed closet of our lives all the valuable lessons learned therein just as soon as we get out in practice. Is there not a great big truth in this statement? And how by contrast would the professional world look to the rest of the world if each one of us as physicians could associate the wonderful leverage of technical knowledge which we have to a greater or less extent with the creed of our poet, when he said:

"I have to live with myself, and so
I want to be fit for myself to know.
I want to be able, as days go by,
Always to look myself straight in the eye;
I don't want to stand, with the setting sun,
And hate myself for things I've done.
I don't want to keep on a closet shelf
A lot of secrets about myself,
And fool myself, as I come and go,
Into thinking that nobody else will know
The kind of a man I really am;
I don't want to dress up myself in sham.

"I want to go out with my head erect,
I want to deserve all men's respect;
But here in the struggle for fame and self
I want to be able to like myself.
I don't want to look at myself and know
That I'm bluster and bluff and empty show.
I can never hide myself from me;
I see what others may never see;
I know what others may never know,
I never can fool myself, and so,
Whatever happens, I want to be
Self-respecting and conscience-free."

In other words, when you have builded around your professional resources a fence of insincerity and unfair dealings with your fellowman, of impatience, inconsistency, dishonesty, immorality, unfairness, and, above all, an indifference to those qualifications that are necessary to a real high grade citizenship, then you have placed a handicap around yourself, which you can never overcome as long as it exists. Would an automobile ever be of any service to you locked up in the garage to rust and decay and never be used? What would be the use of having money or anything money could buy, or having character or anything character can beget, and lock it up in such a way that it can never make the necessary contracts in life for any good purpose? Will scientific attainment ever be of any service to the world and humanity, and reflect any credit on the one who possesses it, if it is never turned back into the great current of service to the world for its use and enjoyment? Would your medical knowledge ever be of any service to you or to the world if you stay at home in bed and never go out into the world and put it to use? On the contrary, how about making of yourselves as

citizens, just as you have as physicians, "charmed pebbles" on the shores of the great sea of life, turning into gold and precious metals everyone with whom you come in contact?

Did you ever hear of a physician's forgetting that a patient when sick physically is not presumed to be well mentally, and going so far as to attempt to discipline the patient? Try, then, and figure out what it cost the physician who made the mistake. The cost in dollars and cents is trivial, but the cost in influence for good is high. Let us always carry with us the thought, "O wad some power the giftie gie us, to see ourselves as ithers see us." May we, therefore, always remember that our guide and watchword should ever be those fundamental traits of character and citizenship which are always necessary to good, efficient service, and to success in any line of endeavor. And so, "if we can keep our heads when all about us are losing theirs and blaming it on us," and not be swept from the pedestal of prudence and justice by any tide of irrational thought and action, then and only then will we be able to say, like the faithful watchman of the night, "All's well."

PRE-NATAL AND POST-PARTUM CARE OF THE MOTHER.*

By JAMES M. MILLER, M. D., Wytheville, Va.

I do not know just what the members of the Executive Committee of this Society have against my friend, Dr. Woolling and myself, but if the punishment meted out to us is intended to be commensurate with the crime committed, then, their grievance must indeed be great. I can honestly assure this committee, however, that prior to the assignment of this subject, or, more properly subjects, I had only the kindest feelings towards each individual member. The more I think of the task assigned us, the greater apparently must be our culpability in their sight, for some fancied wrongs done them. The plural word is used here advisedly, for in some way or other unknown to us, we must have committed a most atrocious crime or crimes against the body as a whole, as the punishment is entirely too extreme for a wrong against an individual.

Pre-natal and post-partum care of the mother! Just what does this embrace? If you will think it over, and sweat over it as I have done, you will doubtless come to the conclusion that it is almost all-embracing, and its handling truly a man's size job. Could not this subject without unduly stretching its meaning, be made to embrace all of a woman's life, from the cradle to the grave? Her physical development while a babe, as also while a child, has much, perhaps I should say all, to do with her child bearing life, and her condition and care while pregnant, and during post-partum period determine, to a great extent at least, her well being in after years. So, consideration of this subject in its broadest sense would include all of a woman's earthly pilgrimage. After more or less serious thought and consideration, and being naturally of a forgiving spirit, it has occurred to me that this committee did not wish to unduly punish us, but merely intended that we, in a more or less cursory sort of way, should mention some of the more important conditions to be considered in pregnancy, labor and the lying-in-period, and thereby, perhaps, provoke discussions that will be interesting and profitable to those of us engaged in obstetrical work.

This is, and the future will become increasingly so, the day of preventive medicine. It is probably not too much to expect that within the next several years all infectious and contagious diseases will become amenable to preventive measures. Is it not also within the bounds of reason that we may learn how so to live that such organic troubles as the various heart lesions, as well as those of the kidneys and other organs, may be, if not wholly prevented, at least reduced to the minimum? Be this as it may, there is one class of medical work that will always demand and receive attention. Obstetrics has been practiced in some form or other probably since the first year in which woman was created, and will continue to be practiced so long as humanity exists. But enough by way of introduction.

Very little if any thing that I shall say will be new, and probably nothing will be original. There can be no such thing as unvarying routine in the practice of obstetrics. Every case must be a law unto itself, as it will differ in varying degrees, in some particulars at least, from every other case. All expectant mothers, however, need encouragement, jollying along, and most of them will not only live and thrive upon this, but do admirably well.

The first thing to be determined when an

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expectant mother places herself under our care is to ascertain if she is really pregnant. This may be an easy or impossible task, depending upon the period of gestation, as well as upon other conditions. Cessation of menstruation is classed as one of the earliest presumptive signs. We cannot, however, place too much faith in this, as a woman may become pregnant before she has ever menstruated. She may become pregnant during the amenorrhea of lactation, or that due to other causes. Again, instead of cessation of menses during pregnancy, menstruation may continue for at least one or two months. Morning sickness is to be reckoned with in from one-third to one-half of all cases. This commences usually about the fourth week, but may begin earlier. Perhaps salivation and changes in the disposition of the pregnant woman should be mentioned as quite often early signs. The latter may amount to nothing more than a slight irritability, or it may be so pronounced as to make the home life, especially for the husband, almost, if not quite unendurable.

Among the early objective signs may be mentioned changes in the breasts. As early as the fourth week there may be enlargement, tingling, burning and discoloration around the nipples. Bluish discoloration of vulva, vestibule and vagina occur as early as the eighth to twelfth week. Hegar's sign may be elicited as early as the sixth week. This sign, as you know, is softening and compressibility of the isthmus and lower uterine segment. Marion Douglas, of Cleveland, in the *Journal A. M. A.*, of August 19th, claims we can be reasonably sure of pregnancy in a week or ten days after conception. This, to my mind, sounds too good to be true. His sign is as follows: The examining finger advances up anterior of uterus until uppermost point of cervix is felt, above which is the slight depression marking the site of the future lower uterine segment. This is the forerunner of Hegar's sign. At this point a rubbery elasticity may be felt very early and an edemic pitting obtained which persists for some time after removal of depressing finger. To those able to divine the future, of which number I am not one, this sign may be very valuable. There would necessarily be so little change in the form and consistency of the uterus in a week that he who could definitely ascertain this change would indeed be a wizard in this particular field.

In the second trimester of pregnancy, we have the subjective symptom of quickening, and the objective ones of both active and passive movements of the foetus.

What of the diseases occurring during pregnancy? There may be many, but I shall mention but three, namely, excessive vomiting, albuminuria and eclampsia. Vomiting, as already stated, occurs in from one-third to one-half of all cases, and may be slight, or so severe as to seriously endanger the life of the patient. We may disregard slight nausea and vomiting, if the patient will let us, but the severe persistent form, called pernicious, or hyperemesis gravidarum, will be difficult, sometimes impossible to relieve, depending to a great extent upon whether it is due to neuroses or toxemia. Nearly every drug in the pharmacopeia has been used, both with apparent success and failure in the neurotic type of this trouble, thus proving that in this condition suggestion is more potent than drug therapy. In those cases due to toxemia, the proper course is, if possible, to find the cause, and then endeavor to remove it. Failing in this, it may become necessary to empty the uterus, but this should never be done unless patient has been seen by one or more other physicians, and they have concurred with us both in diagnosis and treatment. Albuminuria in pregnancy, just as the vomiting of pregnancy, may amount to very little, or be of the gravest concern. As to the cause of this condition, you may take your choice of those given by the various authors, confident in the fact that, while you may be wrong, it probably cannot be proven, and there are a sufficient number of others holding the same belief, so you will not be so very lonely. In my opinion, systematic examination of the pregnant woman's urine, at stated intervals, the intervals lessening as pregnancy advances, is of vital importance. Blood pressure readings taken frequently are also of great value. If these two procedures are followed, and findings carefully weighed and considered, we will usually diagnose this trouble in its incipiency, when preventive and remedial measures are most effective. The laity, especially those living in the rural districts, need much education just here, and it is our duty, when we are engaged to attend the patient, to inform her of the great importance of these examinations. Preventive treatment, not only in obstetrics, but in every field of medical prac-

tice, is slowly but surely coming into its own. There is, however, a vast amount of missionary work yet to be done.

Much that has been said in regard to albuminuria in obstetrics applies equally as well to eclampsia. Here you can also pick any of a number of supposed causative factors, and have just as good a right to your opinion, so far as proof is concerned, as has the other fellow to his. By careful periodic examinations of urine and blood pressure, we may often, by proper hygienic and other measures, be able to forestall and prevent this terrible and alarming condition. If not, and it progresses to the gravest stage of persistent convulsions, there is, in my opinion, but one thing to do, namely, terminate pregnancy as quickly as possible, employing that method offering most safety to the mother. The trend recently seems to be away from the radical Cesarean operation to more conservative modes of treatment, the prognosis being more favorable for both mother and child.

There are many other conditions often arising in the pregnant woman worthy of consideration, but time forbids that we discuss them.

We now come to the management of labor. If I were a teacher of obstetrics, I would try very hard to impress two things upon my pupils, namely, the practice of cheerfulness and cleanliness in the lying-in-room. Not only should the physician be cheerful, but also, if possible, he should induce it in the patient and attendents as well. Be surgically clean yourself, and endeavor to keep patient the same way. If you can better accomplish this by wearing rubber gloves, then by all means wear them. If you can better maintain this condition by making your examinations through the closed rear door of the rectum, rather than by way of the open front door of the vagina, then make use of the former entrance. If you happen to be that *rara avis*, who can ascertain all that he wishes to know by abdominal palpation, then use this method, praying that you may be right in your interpretation of things hidden from common mortals. Having by examination ascertained condition of the birth canal and presenting part of child, and having encouraged the patient, we may, if we are sure that we will not be needed for some time, retire, I mean from room, not from the case, unless we see that it is more than we can handle successfully. Perhaps we had better remain in the immediate vicinity even then, summon a brother physician, and "let George do it."

Time forbids that we take up each presentation and follow its consecutive steps to a more or less successful delivery. Much as I would like to do so, I shall have to forego the pleasure of reproducing *in toto* some author's work on obstetrics. There are many interesting conditions that may arise in any case of labor. Occasionally we are confronted with difficulties upon the proper solution of which may depend the future physical and mental well-being of the mother, the child, or both; possibly the issue may involve life itself.

How can we best handle occipito posterior positions, transverse presentations, face cases, placenta previa, prolapsed funis, eclampsia and many other conditions? What of Potter's version? Is it, as some claim, a panacea for most of the difficulties arising in labor? Should it be routine practice?

What of pituitrin in labor? This drug is worthy of any obstetrician's consideration, and I cannot forbear from making some remarks in regard to it. Perhaps there is no drug more potent, both for good, when properly administered, and for evil, when improperly used, than is this. It should never be employed as a routine measure, but only when there is some unmistakable indication for its use. I believe it has its place in all three stages of labor. Do not misunderstand me here. I do not mean in every, nor in the majority of cases. In the first stage, with pains far apart, especially if this condition has continued for hours, with patient becoming tired, discouraged and nervous, a dose of two or three minims of pituitrin, repeated if necessary every twenty or thirty minutes, will often give satisfactory results. In the second stage, with os fully dilated, and no cause for delayed delivery except lack of pain force, a dose of from three to five minims will usually terminate labor with no bad results. A large dose at this time, say one cubic centimeter, unless we have found smaller doses insufficient, would be almost, if not quite, criminal. When this drug was introduced the dose recommended was one c.c. All of us older physicians, who did obstetrical work at that time, remember the frightful pains produced when that amount was given. That, very likely, is the reason the drug has fallen into disrepute, and deservedly so, when given in such doses. Pituitrin also has its place in caus-

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ing expulsion of retained placenta and in controlling post-partum hemorrhage.

What of the care of the mother after delivery? After seeing that the child needs no immediate attention at this time, we should devote our entire care to the mother, especially in trying to prevent post-partum hemorrhage. How can this best be done? She should be given teaspoonful of fluid extract of ergot, immediately before, or just after, the child is born. All pillows should be removed from under the head at once, so as to increase blood supply to upper part of body and lessen it to lower part. Lastly, but perhaps of most importance, the womb should be kneaded through the abdominal wall for fifteen, twenty, or thirty minutes. This, in my judgment, should be done for ten or fifteen minutes, even though there is good contraction. Pillows should be left out from under head for at least one hour with patients who are doing well, and who have no more hemorrhage than they should, and for a longer time with those whose flow is too free. After the first day, however, the head should be kept elevated either by pillows, or by raising head of bed, whichever the patient prefers. In other words, give the womb drainage, and by this means reduce to a minimum the danger of puerperal infection. For this reason, I encourage my patients, if doing well, to sit up in bed in three days. If we are careful in regard to asepsis, and drain womb in the manner suggested, we will rarely see a case of sepsis after labor. It seems to me that this disease is rapidly declining anyway, possibly due to improved technic upon our part, but perhaps more to education of the laity. It would be interesting to know just what the obstetricians here today think of this statement.

I shall mention but two post-partum conditions, lacerations and mastitis. We all agree that, with few exceptions, lacerations should be repaired immediately. Occasionally the condition of the mother will be such that she should not be made to undergo this small extra shock, but this will be the case very seldom. Inflammation of the breasts, or mastitis, is so painful and so quickly undermines the patient's health, that it deserves our very best thought and consideration. If proper care is given the nipples during the latter months of pregnancy, mastitis will be rarely seen. The patient should exercise great care in avoiding injury to nipples by corset, dress, or in any other manner. The nipples should be kept scrupulously clean, and those that are too soft should be hardened by astringent lotions, and those too hard softened by applications of vaseline, or cocoa butter. It is a little difficult to get the average pregnant woman very much interested in a condition apparently so remote as mastitis, a trouble that she may never have. The treatment, as a rule, is quite simple. If the baby is removed from the breasts for a day or two when this condition first begins, the breast may be snugly bandaged and ice-bags constantly applied, provided the skin will bear this continuous application, and the trouble will often be aborted. If it is not, and goes on to suppuration, there is, of course, but one thing to do—evacuate and drain.

There are other pre-natal and post-partum conditions worthy of consideration, but this paper is already sufficiently long, probably too long. If it succeeds in provoking an interesting discussion on any phase of this important work, it shall have fulfilled its mission.

THE MANAGEMENT OF THE RACHITIC CHILD.*

By T. R. BOWERS, M. D., Bristol, Va.

In opening the discussion on this subject, a brief review is made of the condition termed rickets, considering its different phases, etiology, symptomatology, pathology, and treatment. A review is also made of the progress made in the studies and research relating to this condition. In doing this, we recognize the widespread prevalance of this disease, and learn to appreciate the valuable contributions of workers in this field. Again, we are stimulated to utilize facts thus far established in our efforts toward the prevention and cure of this disease, and workers are encouraged with their results to continue research.

Rickets, with our present knowledge of its etiology, may well be classed among the deficiency diseases. It is a disorder of the mineral chemistry of the body, occurring in infancy and childhood, and characterized by imperfect calcification of the bones, especially in the metaphyses and epiphyses; and, further, by retarded growth and development of both bone and muscles. It is accompanied by an alteration in the absolute amounts normally present, and the relation to each other, of the

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quantities of phosphorus and calcium in the blood serum. The disease, if not cured, results in functional disabilities of varying degree, and in permanent deformity of the skeleton.

I.—History

Medical literature for the past three centuries bears discussion of rickets in its different phases, and recently Foote found evidence of the existence of the disease before the fifteenth century; however, credit is given Francis Glisson for its first description in his treatise on the subject published in London in 1650. He called the condition "rachitis," a term derived from a Greek word relating to the spinal column, on account of the kyphosis and rounded aspects of the back as seen in well developed cases. The older writings contribute accurate clinical descriptions, but only in the past few years has any real progress been made towards establishing its etiology and in explaining its behaviour under treatment. The great prevalence of rickets has long been appreciated, but since the advent of the roentgen ray it has been found to be much more common than it was previously thought. It is more common among the negro, due to the pigmentation of the skin depriving him of the benefits of the sunshine we enjoy. It varies with the seasons, being seen more in the Winter and early Spring. In the United States, it is seen to a greater extent in the Northern sections than further South, where the sunshine is more plentiful. Eliot, in her study of 179 infants in New Haven, found the existence of rachitic conditions in 12 per cent before the second month, and in 65 per cent before the sixth month. She states that "its presence seemed almost normal in the fat rapidly growing infants." It is most commonly seen in the last half of the first year of life, and is not often seen after the fourth or fifth year. It is seen more frequently among the artificially fed, but is no longer considered an infrequent condition in the breast fed. This realization of its great prevalence, and the establishment of preventive and curative means by recent studies, has served to stimulate further research, and no doubt but in the near future many of the yet questioned points will be clarified.

II.—Etiology—Pathogenesis

Study so far has revealed unquestionable evidence that at least five factors are concerned in the production of rickets; namely, sunlight, exercise and growth, calcium, phosphorus, and the accessory food substance now known as vitamin "D." It has been clearly demonstrated that exposure to sunlight not only checks a rachitic process, but causes a change in which the physiological processes of the body brings about a repair of the diseased and a return to normal function of the body. This change is apparently brought about by activation of the cholesterol in the skin of the animal or human exposed to the ultra-violet ray, whether it be from the sun, quartz or carbon arc lamp. In this connection, Hess and Steenbock, Weinstok, and associates, found that various oils and certain foods when irradiated always contained this anti-rachitic property, and subsequently irradiated ergosterol has come to us as the so-called "captured sunlight" for our use in the prevention and treatment of rickets. This is a valuable adjunct to our other proven means of attack on this disease. Hess first systematized the use of sunshine in the treatment of rickets, while its value, as well as that of cod liver oil and sea air had been recognized by older writers on the subject. The ratio and quantities of blood calcium and phosphorus is known to be disturbed in rickets, and it has been established that this disturbance is corrected by the use of irradiation or administration of the vitamin "D," or, better, by both combined. While vitamin "A" was formerly considered the anti-rachitic factor, it has been found that vitamin "D" is most active in its anti-rachitic qualities, and that vitamin "A" is more concerned with growth and development. With the exception of irradiated ergosterol, cod liver oil, properly tested and standardized, is the greatest natural source of vitamin "D." Second to this is cow's milk from cows receiving a proper diet. Experiments have shown that vitamin "A" content of cow's milk is determined entirely by the nature of the cow's food, and that the vitamin "D" content depends upon the degree of exposure of the cow to sunlight. Thus it is seen that the vitamin "A" is not manufactured in the cow, but just passes on into the milk from foods taken, while vitamin "D" is manufactured within the animal's body. From this conclusion is seen the necessity of the nursing mother having a reasonable exposure to sunlight, or an ingestion of cod liver oil. Considering the fact that often

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neither of these requirements are met, it becomes necessary that the breast fed baby must be supplied with the known anti-rachitic factors in the way of exposure to the sunlight and administration of cod liver oil for its protection against rickets.

III.—Symptomatology

Rickets is a condition which is often overlooked, there being probably more cases unrecognized than are diagnosed, due to the fact that it is often not completely developed and does not attract the attention of the examiner. Among the earliest symptoms are restlessness, irritability, loss of appetite, and head sweating, with a rolling of the head from side to side. These are all suggestive symptoms and await further corroboration. The typical early case of rickets is that of a baby in the second half of the first year of life, fairly well nourished, and normal to casual examination, but which detailed investigation shows to differ from the normal in many respects—head somewhat square shaped, fontanelle widely open, with borders thin and yielding too readily to pressure. Areas of softness may be found on the lower aspect of the occipital or lateral portions of the parietal bones. Dentition is retarded. There is delay in the ability to sit alone, or in an effort to stand. A general atonic condition of the muscles is seen. Enlargement of the costo-chondral joints may be felt if not seen, and in the more advanced cases enlargements will be noted in the distal ends of the radius and ulna. Decalcified areas are shown by X-ray, while a decrease may be found in the blood inorganic phosphates. Rarely are all of these characteristic changes seen, but often a routine search will reveal some slight divergence from the normal in infants who upon casual examination seem to be normal. The more advanced cases are easily recognized; the head is definitely square, and slightly enlarged with prominent bosses and enlarged fontanelle. The costo-chondral joints are visibly enlarged—the rachitic rosary—as is also the transverse groove at the point of attachment of the diaphragm, known as Harrison's groove. The patient has a large protuberant abdomen with muscular atony, diastasis of the recti, and umbilical hernia. Bad posture is noted, the legs are bowed, knees knocked, and there is relaxation of joint ligaments. Marked bony changes are shown by X-ray. Retarded dentition may or may not be due to rachitic process, but the caries seen later in both the temporary and permanent teeth are largely influenced by rickets. The blood phosphorus is greatly reduced, having been found as low as .8 mgm. per 100 c.c. by Iverson and Lenstrup, and frequently being 50 per cent below normal, the variation corresponding with the seasonal curve, as is seen in rickets, being highest in March and reaching its lowest in June and July. Hess considers the rachitic rosary to be the most important clinical sign. Tetany is frequently associated with rickets and has a similar seasonal incidence. It is characterized by a hyperirritability of the nervous system, which leads to convulsions in extreme cases. There is seen in this condition a diminution of the calcium content of the blood out of proportion to that of the phosphorus. Park and his associates have suggested that tetany be regarded merely as another form of rickets, one involving the calcium rather than the phosphorous metabolism. In severe tetany the convulsions become rather general and are not unlike an epileptic state. Recently such a case came under my observation, but cleared up very promptly under the administration of calcium chloride, cod liver oil, dietary regulation and ultra-violet irradiation with mercury vapor quartz light. There has been no recurrence of symptoms in this case during a period of eighteen months.

IV.—Pathology

The accepted view today is that changes in the bone are uncalcified deposits, or improperly calcified tissue, with this in super-abundance. Although there are doubtless pathologic changes in various tissues and organs, the primary changes that are considered are in the bony structure, and are seen in those parts as indicated by the symptomatology already mentioned.

V.—Diagnosis

The diagnosis is based upon the symptoms and signs, X-ray, and laboratory findings mentioned above. It is simple in the well developed case, but requires careful examination and study in the early cases. Ofttimes the X-ray and laboratory facilities are not available, and one must rely upon the clinical findings. One should remember that breast-feeding does not exclude the possibility of a rachi-

tic condition, and that the malnutrition is not necessarily seen. Rickets is differentiated from: 1. Scurvy by the dietary history, absence of blood changes, and negative X-ray findings; 2. From syphilis, by consideration of the signs and symptoms of syphilis and blood Wassermann, and the absence of improvement under anti-rachitic therapy; 3. From Pott's disease, by placing the child on its stomach, when in rickets the curve in the back disappears, while in Pott's, the kyphosis becomes more noticeable.

VI.—Prognosis

The majority of rickets is mild and goes unrecognized, recovery being spontaneous with favorable season and sunshine and natural intake of vitamin containing foods. The more advanced cases are slower in their course and often leave some permanent deformity, the most important of which is probably pelvic disproportions and contraction, which accounts for much dystocia with its many ills. Marked deformity of the chest may result in embarrassment of respiratory system, and is doubtless indirectly responsible for many and frequent acute respiratory infections. Indirectly, its effects are often seen to a greater or lesser degree upon the other general systems.

VII.—Treatment or Management of These Cases is Clearly Indicated in the Discussion of its Etiology

This is considered in two phases:

Preventive

1. This is, of course, of first importance, for, when this is properly practiced, the reference to curative treatment will be unnecessary. Preventive measures should begin with the institution of proper hygiene and diet for the expectant mother. She should have regular exposure to sunshine, and a diet general in nature, consisting particularly of foods rich in vitamins A and D.

2. Breast feeding, particularly for the first few months, followed with a diet containing vitamins A and D. Hess has shown that egg yolk offers most protection in addition to good cows' milk. Green vegetables and meats followed at proper ages.

3. Sunlight exposure as routinely as orange juice is given for its vitamin C.

4. Administration of standardized cod liver oil, in sufficient doses, that is, one-half to one teaspoonful twice a day in children under two months, and one to two teaspoonfuls twice a day after two months. This is given throughout the year, except from May to October, when, if proper sun exposure is given, the oil is not necessary. The sun baths are begun at the third or fourth week, being given for from ten to fifteen minutes to one hour between ten A. M. and three P. M. This is supplanted by exposure under artificial light, either mercury quartz or carbon arc, during the Winter months. Infants enjoy the exposure, and as they depend upon someone for food, so do they for sunlight. The older children will naturally seek the sunny places in their play. A good tan is desirable, but care is taken to avoid burning.

5. Ultra-violet irradiation is given about three times a week with the lamp thirty-two to twenty-four inches from the body. The exposures are begun for three minute periods and increased two minutes each time, depending upon the tolerance of the individual baby, which varies greatly, until about twenty minutes are allowed, this being divided between the front and back. Reflected light has about 50 per cent of the value of direct sunshine, and should be utilized when exposure to the direct is not practical. It has been proven that body irradiation, as mentioned, liberates within the body sufficient vitamin D to prevent or cure rickets, when used together with proper dietary regulation.

6. Irradiated ergosterol, recently passed by the A. M. A. Council on Pharmacy and Chemistry and given the name of "viosterol," is the most potent source of vitamin D at our command, containing one hundred times that found in standardized cod liver oil. The recent studies of Hess and his associates have shown the proper doses of viosterol to vary from eight to ten drops a day in the normally growing infant to fifteen drops a day in premature infants, as a preventive.

Curative

In the management of an active case of rickets we have the "specifics" already referred to as preventives, which are used more intensively and in larger amounts.

1. Cod liver oil must be given in large amounts, at least a teaspoonful three times a day in an infant six months old, and larger amounts to older children. Hess has pointed

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out that no danger is encountered from either cod liver oil or viosterol if not more than eight teaspoonfuls of oil or its equivalent of viosterol is given.

2. Body irradiation, either with natural sunshine exposures, or with the mercury vapor quartz or carbon arc lamp being used, the latter having no advantage over the former in suitable seasons. This treatment must be given regularly and supported by general hygienic care and appropriate dietary regime, consisting of food rich in vitamins.

3. Irradiated ergosterol is used in larger doses, separately or together, with cod liver oil, fifteen drops a day in mild cases and twenty drops a day in the more severe. In associated secondary anemia some iron preparation is administered. In the more advanced cases with deformities, such orthopedic measures as indicated are recommended.

It is hoped that this review will remind some of us who have heretofore given little attention to the prevention of this disease, of the possibilities of reducing the rachitic morbidity to a minimum by utilizing the measures established for us by the diligent workers in this field.

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A VICIOUS CIRCLE IN THE VETERANS' BUREAU.*

By NELSON MERCER, M. D., Richmond, Va.

This paper is presented to the members of the Medical Society of Virginia to acquaint them with conditions existing in the Veterans' Bureau scheme of hospitalization. Knowledge of these facts will enable the medical profession and the general public to unite in an effort to remedy the unsatisfactory medical and political methols which prevail in practically all Bureau hospitals.

Although the World War ended eleven years ago this fall, thousands of ex-service men and women are applying yearly for treatment in Bureau hospitals throughout the country.

For those who have not served as doctors in Veterans' Bureau hospitals, a summary of the average experience will best illustrate what occurs therein.

A veteran who applies for hospital treatment, after numerous delays in getting his papers completed and approved, is finally authorized to enter a Bureau hospital for observation, and treatment if found necessary. In the receiving ward he experiences more delay in having a diagnosis made, and he becomes more prejudiced against Veterans' Bureau methods. When a diagnosis is made and he is sent to a certain division of the hospital for treatment of a war service disability, his hospital compensation begins, and in many cases this is more than he could make at his usual occupation. This regular monthly Federal check convinces him that the hospital is not such a bad place to stay for some time. And here he learns from his fellow beneficiaries how to remain in hospital indefinitely.

When the medical board examines him and recommends his discharge for home treatment, or as having reached the maximum improvement in hospital, he and the veteran societies frequently protest his discharge from hospital and the consequent reduction of his compensation. All the political pressure available is brought to bear to keep him in hospital, and his senators and representatives in Congress are usually most obliging in their influence to let him remain indefinitely regardless of his physical condition as determined by the medical board.

The direct result and effect of this political interference with the medical work and prestige of the Bureau doctors is most unfortunate, for the patients see that they can run the hospital to suit themselves, and this they do. The frequent antagonism of patients toward the Bureau is usually due to the long delay in getting into a hospital, and then toward the doctors in the hospitals whom they regard as bookkeepers and stenographers.

This derogatory estimation of the professional ability of the majority of Bureau doc-

*Read at the sixtieth annual meeting of the Medical Society of Virginia, in Charlottesville, October 22-24, 1929.

tors is founded on the endless paper work and keeping of voluminous records which are required of them and are considered as absolutely essential by the central office of the Veterans' Bureau. This system of records and paper work prevents the doctors from giving sufficient medical care to their patients, and thereby encourages the lack of confidence in the professional ability of those who are responsible for their treatment.

Another factor in the contemptuous regard of the patients for their Bureau doctors consists in the types of physicians usually found on duty in Bureau hospitals. These mainly are elderly mediocre former practitioners who are content to retire to some easy berth in their old age, and youthful recent graduates who are in the hospitals for experience. The absence of well qualified medical and surgical specialists in the hospitals is almost universal. Also, the need of adequate modern diagnostic and laboratory apparatus exists in many hospitals.

But how can we expect high grade physicians to remain in the Veterans' Bureau medical service when they must become clerks, and they are handicapped by lack of proper equipment, and their recommendations are set aside by political influence, and they are openly ridiculed by their patients?

No self-respecting physician will compromise his medical ideals and professional ability by submitting to being changed into a bookkeeper or a stenographer at the cost of his medical training, or by such insults to his medical knowledge. If the keeping of records interferes with the medical treatment of patients the records have the precedence with the Veterans' Bureau.

As a result of this system, hundreds and probably thousands are now being housed in Bureau hospitals who are able to resume some form of gainful occupation, and the innocent taxpayers are yearly paying millions of dollars for the upkeep of these hospitals, for the compensation to the patients in them, and for the salaries of employees of the Bureau. And the end is not yet in sight.

By bringing these facts to your attention and arousing your interest in this situation to the extent of effecting a remedy to improve the medical service, medical personnel, and equipment of the Veterans' Bureau, reduce the number of patients in its hospitals who are able to go home, divorce political influence from the operation of these hospitals, and lower the prohibitive cost of running the hospitals and agencies of the Bureau, it is hoped this paper and time have not been wasted.

1100 *West Franklin Street.*

PSYCHOLOGY—ITS RELATION TO THE GENERAL PRACTICE OF MEDICINE AS VIEWED AND TREATED BY A GENERAL PRACTITIONER.*

By B. C. KEISTER, A. M., M. D., Harrisonburg, Va.

It is a well-known fact that, during the past two or three decades, we, as regular physicians, have had a larger percentage of mental and nervous diseases to treat than ever before in the history of medicine. Since the great World War, there seems to be a larger number of suicides, more divorce suits, more criminology among the better classes of our citizenry than ever before in our country.

What is the prime cause of all this? May I venture as an explanation the assertion, first, the unholy mixture of the races, and the jealousy of the nations, breeding antagonism with a yearning for conquest and war! This applies especially to Germany and France, for both of these nations carry a chip on the shoulder, as a dare and challenge. This fact I know by observation. This unfortunate attitude on the part of the leaders and pseudo-politicians of these nations is mainly due to mental aberration and false-pretense. It is a well-known fact that the World War and, I may add, the Civil War between the States, as well as a number of the foreign wars, were caused, according to history, mainly by faulty logic and unsound reasoning of the hot brains and hot blood of a few of the main leaders of these wars. Take, if you please, Napoleon Bonaparte, the world's greatest war commander, France's greatest leader—he was a victim of epilepsy, a brain disease of the most serious type, and which, at certain times, destroys the functions of all the faculties of the mind, causing premonitions and false reasoning and wandering of the mind. We may also consider Kaiser Wilhelm and many of his ancestors as mental wrecks at certain times in their lives, being classed by many under the heading of "maniac depressive psychosis," and unfit or incapable of reasoning with other nations on important questions of imperial statesmanship,

*Read by title at the sixtieth annual meeting of the Medical Society of Virginia, Charlottesville, October 22-24, 1929.

more especially that of preventing wars with other nations.

Physical weakness and physical diseases may impair the mental faculties, giving rise to many of the minor diseases, such as hysteria, maniac depressive insanity with suicidal tendencies, addiction to liquor, morphine, cocaine, and other habit-forming drugs. Then, too, we have a weak-minded class who allow their emotions and passions for the opposite sex to prevail and control their conduct, regardless of society pride, alienation of affections, ending often in suicide or murder. These cases are classed with the maniac depressive psychoses, and are considered among the milder forms, but constitute the most common of all mental diseases, but rarely become so serious as to fit them for the asylum for the insane. Quite a large number of suicides which startle the community are due to the depressive phase of this disease, and most of the cases, where the mother, less often the father, destroys the children and herself, are of this origin. In the milder cases, the patient, without any particular cause, is melancholy, and finds voluntary action difficult, concentration of attention painful, is non-productive so far as plan and purpose are concerned, and loses all sense of pleasure in existence. Very often the disconcerting feeling of unreality appears in which life is viewed through a haze. These people are not insane, in the legal sense of the word. They carry on their work with much pain and effort, or if possible, they leave for a vacation and rest; smiles and laughter disappear from their lives. Then as inexplicably as the cloud appears, it suddenly disappears, and the patient is herself or himself again. Maniac depressive psychosis is considered the most hereditary of all mental diseases. Many cases are cited where several generations are involved.

The cyclothymiac temperament, a temperament of rapid and extreme fluctuations of mood, is considered by some authors, as the basis of this disease. This temperament may be inherited from either parent. While this is true, it is certain in many cases that only one member of a family may be afflicted. There is a certain school which, rejecting the hereditary cause of this condition, falls back on the psychogenetic causes, that is emotional reactions, due to adverse circumstances and traceable by the psychoanalytic procedure. The heads of the psycholanalytic movement say but little about this disease. Nothing at all resembling scientific proof has been adduced to establish this point of view, and the safest attitude at the present time, is to regard maniac depressive psychosis as of unknown cause. At times, however, it is strongly familial; that is, it may run in families. Most of the attacks, remarks a distinguished writer on the subject, tend toward spontaneous recovery, a fact which psychiatrists themselves sometimes overlook in the evaluation of their treatment.

Treatment of This Disease

Many a healer has gained a great success and reputation, because his treatment of a maniac or melancholic has been attended with startling success, but this success is entirely due to the fact that his treatment was administered at the peak of the disease. The main treatment in the depressed stage consists in placing the patient in a first-class hospital or sanatorium, and selecting a first-class all round trained nurse to look after all details, keeping up the nutrition, administering only such medicines as the physician in charge directs; but one of the main things to look after is to keep the patient from his most urgent desire, to take his own life; keeping the patient occupied at some line of interesting employment which will increase his appetite, and bring about sleep. Then let nature do the rest.

Dementia Precox.

Dementia precox is another mental disease of unknown cause, and also runs in families, is much more sinister and more unrelated to the experiences of life than maniac depressive psychosis. It starts early in life, often with a peculiarity of temperament, and this peculiarity becomes progressive, leading in most cases to a breakdown in personality. In this disease, we find some of the classic symptoms of insanity, such as hallucinations, delusions, breakdown of judgment and memory, its grotesque alterations of conduct, the pathetic and horrible alienation from normal human emotion and will power. Then, the mental symptomatology of dementia precox is the most varied and the most puzzling of all mental diseases. In the main, they are unsocial, and relatively inaccessible to their friends and

advisers. These odd people may continue useful and sometimes are even talented throughout their entire lives, but they stand out as potential candidates for the hospital. They often mistake phantasies for realities, and these peculiarities become so exaggerated at times, as to unfit the individual for self-sustaining community life. Thought becomes split up into delusions, images are metamorphosed into hallucinations, conduct becomes out of relation to the common ideal, and finally becomes obnoxious. The trend of phenomena is toward dementia and apathy. Such a person, sitting on a bench in a park, is utterly oblivious as to what goes on outside of him, and what goes on inside of him can only be guessed at, in our present state of knowledge. It should not be inferred from the above, that all or even the majority of odd or peculiar people are potential cases of dementia precox. What is implied here is that a disproportionate number of cases of this disease have a history of being semi-hostile, semi-shy, non-assimilated members of society. Nevertheless, there are plenty of cases arising with no such back-ground, with no gross previous peculiarity, people who have in full the current of contemporary thought and feeling, but rather suddenly start to misinterpret the life around them, and plunge with startling rapidity into a permanent, rapidly progressing psychosis. In other words, the abnormal personality from which so many of these cases start is not a cause of the disease, but a very early symptom of it.

No Pathologic Cause For Dementia Precox.

With all this grotesque and varied symptomatology, lasting often from early youth to old age and challenging the asylums of the world in a way which no other disease does, medical research has established no pathology for this apparently well-known disease. During life, the blood, the urine, the feces and spinal fluid show no constant change worth while, the X-ray reveals no lesion, and the great organs of the body seem to function quite normally in every respect. After death, the organs responsible for this disease, hide their secrets from the pathologist.

Some Popular Fallacies as a Cause of Mental Disease.

It is held by some writers that over-study is a cause of certain forms of mental disease. The average psychiatrist would say that an exhausted state of the body might cause mental weakness, and would add that over-study is a bad substitute for the gorgeous realities of play and recreation. There are many abnormal mental types who are too slavish in their devotion to learning and high grading. The boy or girl who is too conscientious a student, and does not find time for the allurement of sports, any social friendships among the sexes, which is an antidote to the grind of high school and college life, lacks fundamental instincts; in other words, he is not well-balanced in desires and motives and is a potential candidate for mental disease. The excessive study thus marks a type, and in this sense a symptom and not a cause of mental disease. This is also true in business reverses. Some men break down mentally after business stresses, but usually this is a mere coincidence, and a close study of most such cases reveals other causes.

During the panic periods, there is no noticeable increase of insanity, though there are more suicides recorded. So with sex-life from frustrated love to sex perversion, yet no real proof has been adduced to show that these common happenings and habits ever wrecked the mind. It is true that abnormal people do abnormal things and generally reach abnormally to the common lot of that class of people. Thus we find that these major diseases arise on the one hand from great environmental situations, and on the other hand from causes unknown, but which for the present we link up with the indefinite terms "*Hereditary*," "*Inborn temperament*" *and* "*Innate constitutions*," *etc.*

The enviromental causes bring us face to face with age-old problems, such as alcohol, venereal diseases, infection, strain and stress of life and poverty; problems, which are only in part medical, and which are entangled with social customs, diet, marriage, and the warp and woof of organized life. The non-environmental causes have been very widely discussed on the basis of a slender scientific knowledge.

Eugenics.

Eugenics has sprung up as a legitimate effort of man to control mental diseases, crime, and degeneracy, but its most enthusiastic exponents have generalized beyond all reason and experience. In the obscurity which surrounds mental diseases, all nervous diseases seem to look alike to the congenital generalizer. As our knowledge grows and light comes, in-

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sanity breaks up into units, each of which has a different cause and demands concentrated, individual research.

We have barely touched upon the major or more serious of the mental diseases, and will now mention some of the milder and more common mental diseases, classed as nervous diseases, such as hysteria and neurasthenia. These are considered the most common of all nervous diseases, and are classed as such. The common name for all minor mental diseases is "nervousness," and the medical name is psychoneurosis. But according to the best writers on this subject, there is no evidence whatever that the nervous system is at all involved in these conditions, neither in the spinal cord, brain or nerves, nor in any other part of the wide-spreading nervous links, which rule and adjust the body. The function of the nervous system may become impaired without any organic change in structure, but this is a somewhat mysterious and profound explanation which in the long-run means nothing.

There is nothing more mental than a bad case of insomnia, the fatigue, the fears, the brooding introspection, and the frustrated joy of the neurasthenic! There is nothing more born of the mind than the common "Phobias," the tics, the impaired consciousness of the psychasthenic and the hysteric. The manifold symptoms can all be described in terms of abnormal emotion, abnormal volitions, and abnormal ideas, even more than in the case of the major mental diseases. After all, names are important, if they do not hide the facts or create false attitudes. Clearly understanding that nervousness is a folk or common term for a variety of mental disorders of various kinds, and appreciating the fact, that psychoneurosis is a medical term which, in general, means minor mental diseases or disorders, there remains the fact that, next to the ordinary "bad-cold," the psychoneuroses are the most common of all human ills, and add heavily to the sum total of human unhappiness, and still more heavily to human exasperation. Misunderstood by his family, and their despair, the poor psychoneurotic wanders from doctor to doctor, and each specialist takes a whack at him. His tonsils are removed, his teeth extracted, his arches are supported, his back strapped, etc.

The medical profession, trained in anatomy, physiology, pathology, biochemistry, and psychology, has just of late years begun to realize the great need of *psychology* in the treatment of our modern diseases, and now explains that the human is possessed not only with a liver, spleen, heart and kidneys, but has deep emotions which may be sick, has a will which may be thwarted, has curious responses to the complex life, immersing him as it were, all of which may arise from false pride and perverted habit. The writer, having skimmed the surface of this puzzling subject with the various dementias that are common in mental diseases, gives at least an idea of the various symptoms complained of by people and patients who consult first the general practitioner, secondly the mental specialist, and last and finally, the pseudo-scientific faith-healer, who offers a free pass to the Hospital of the Endless Caverns of Eternity!

NOTE:—The writer wishes to express his appreciation to Dr. C. B. Burr, author of Physiology, and to Dr. Abraham Myerson, author of Practical Psychology and Mental Diseases, from whom he has learned much and quoted liberally.

THE CLINICAL APPROACH TO THE PROBLEM CHILD.

By HARVIE DeJ. COGHILL, M. D., Richmond, Va.
Director and Psychiatrist, Children's Memorial Clinic.

The Children's Memorial Clinic is a community child guidance clinic for the study and treatment of the whole child. Because of this fact the clinic must present in one organization the techniques of medicine, psychiatry, psychology, and social work, and an understanding of the work in many related fields, such as education, recreation, character building and training, etc. Its staff consists of a psychiatrist, a pediatrician, two psychologists, a nurse, three psychiatric social workers, a laboratory technician, a secretary, and two clerical assistants. With this group of specialists working as a single unit, problems are studied from many different angles, and a better understanding and more adequate solution reached than is ordinarily possible when one technique alone is used.

The clinic accepts for study children under eighteen from the city of Richmond and county of Henrico, who are referred by the public, private, and parochial schools, the thirty-nine social agencies of the Richmond Community Fund, the Juvenile Court, and private physicians. The children to whom the clinic ministers come to its care because of disordered habits, troublesome personality traits, or un-

acceptable behavior. These difficulties are looked upon merely as symptoms, as the outward manifestations of underlying disturbances, which may be found, in the last analysis, in the mental, physical, or social spheres, but which are interfering with the harmonious adjustment of the child to his environment.

What are the signs which indicate that children need the help of a child guidance clinic? The list that follows covers the range of behavior signs and symptoms that have presented themselves in the cases of approximately seven thousand children who have passed through the doors of the Children's Memorial Clinic in the past five years. For convenience they are grouped:

Group I.—The continuance into childhood of undesirable habits of infancy, such as enuresis, masturbation, peculiar food fads, night terrors, thumb-sucking, and mannerisms of various sorts.

Group II.—Troublesome personality traits, such as extreme degrees of sensitiveness, seclusiveness, secretiveness, apathy, day-dreaming, imaginary and fanciful lying, "nervousness," moodiness, quarrelsomeness, lack of ambition or interest, cowardliness, fretfulness, restlessness, hyper-activity, and inability to get along with other children.

Group III.—Undesirable behavior, such as lying, stealing, truancy, disobedience, bullying, destructiveness, cruelty, temper tantrums, defiance of or rebellion against authority, keeping late hours, seeking bad companions, and various forms of sex activity.

The clinic, in its approach to these problems, earnestly warns the parents not to give the undesirable practices or habits too much attention. It is explained that this does not mean that they should be ignored but that one should endeavor to lead the child away from them gradually with no emotional display. It is further explained that most people at some time or other have had one or more of these habits or traits, and that, through intelligent guidance, without too much direction, the habits have disappeared. If the importance of the child's behavior is exaggerated, if there is too much emotional display, it serves only to keep the child and his problem in the center of the stage, much to his detriment. It is especially stressed that one should keep hands off, in so far as possible, while the clinic searches for the underlying causes of the child's behavior.

As the physical being is the basis of existence, the child is first studied by the pediatrician. A thorough physical examination is supplemented by laboratory tests, including blood Wassermann, blood count, urinalysis, etc. Next, the child is seen by the psychologist who gives various tests to measure his intellectual development in comparison to that of other children of his age, to discover special abilities and disabilities, and to measure his educational achievement. A complete social history is obtained by one of the psychiatric social workers who interviews the parents, teachers, and others who know the child. Her object is to obtain not only factual information concerning the family history and all phases of the child's own life history, but to study the interplay of personalities in the groups to which the child belongs, and to study his conduct and personality traits as they appear in various situations and are interpreted by various people.

Before the psychiatrist sees the child he has already absorbed the reports from pediatrician, laboratory technician, psychologist, and social worker. In the light of the social history the psychiatrist attempts to discover the child's attitude toward himself, his various reactions to the family situations, and to the school and community situations. The psychiatrist learns how conscious the child is of his difficulties, what he considers to be his main trouble, upon whom he places the responsibility, how he feels about his own weaknesses and failures, and what needs he is trying to satisfy by his behavior. The child is induced to talk about his play habits, other interests, gang life, fears, and emotional conflicts; about the interplay of personalities in the home, etc.

The following illustrations show how the clinic is able to help children referred because of one or more of the problems mentioned above: Johnny, at 5 years of age, masturbated. His mother, instead of having him examined by the family physician to determine whether or not there might be a physical cause, such as irritation, constipation, intestinal parasites, local adhesions, or other abnormalities, told him that such practices would make him crazy, and that God would punish him. His mother had had in her early life unpleasant associations with sex, and when her little boy began

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to ask questions about sex, she was very much shocked. She evaded his questions. Later, when he was ten years of age, he was referred to the clinic by a pediatrician because of numerous somatic complaints with no apparent physical basis. He told the psychiatrist that he had committed the unpardonable sin. God was punishing him by causing him to become nauseated. Every time he vomited it was an additional proof of God's anger. During the course of several interviews with the psychiatrist the child's story came out. He was in a terrific jam about sex, with his early experiences as the apparent basis. After several therapeutic talks, during which he was freed of his feelings of guilt, he began to retain his food and now seems to be entirely rid of other unhealthy symptoms, apparently reacting as a happy, normal boy.

Masturbation is the bugbear of many parents. They allow undue fears and anxiety to sway them and cause them to give the habit more weight than it deserves. Any child guidance clinic could give many case histories which show that dangers to the physical and mental well-being of the child are more apt to come from the parent's own attitude and unwise treatment than from the habit itself, and in this conclusion, our opinion would be supported by records of hospitals for the mental and nervous. We do not know of insanity or feeble-mindedness being caused by masturbation, but we do know of neuroses developing as a result of unwise parental attitudes on the subject. The important thing to remember in this connection seems to be that masturbation, like enuresis, is an undesirable habit in itself, but that the real harm to the child comes from his mental attitude toward the problem.

We tell mothers to stop blaming or punishing their children for masturbating, bed-wetting or other allied infantile habits, such as thumb-sucking, rectal irritation, or rubbing of the navel. This is the first step in treatment. Most parents take these problems in a very personal way, resulting in much emotional turmoil. This sometimes defeats the purpose. Some children get satisfaction out of knowing a simple way to agitate the parent; and the parent who becomes so easily agitated is the loser in dealing with the child. The child may persist in the habit because of the attention he gets, if for no other reason. The habit or practice should be treated unemotionally. The introduction of new interests and play with other children helps. Often the habit is deep-seated and it may be a symptom of an underlying emotional condition which should be treated by extensive psychotherapy.

The clinic is called upon for advice in many other types of problems. Robert, aged nine, was referred by the school with the complaint that he was failing the fourth grade, was slovenly in speech and dress, kept his mouth open all the time, and was entirely lacking in a sense of order. His parents wondered if this behavior indicated that Robert was feeble-minded. They were soon reassured on this point. The psychologist reported a mental age of eleven years, which indicated a superior intelligence and the ability to do fifth grade work. The pediatrician attributed his mouth-breathing to hypertrophied tonsils and adenoids. The psychiatric social worker interviewed the parents, made observations in regard to environmental factors, and studied the inter-play of personalities of various members of the family group, all of which may be factors in the problem.

During the psychiatric interview, Robert showed signs of nervous tension, said he was not happy at home, and felt that his parents did not love him. He gave numerous reasons for his feeling of insecurity, the chief one being that they criticized him so much and openly disapproved of him in many ways. The mother, during her interviews with the social worker, had proved herself to be a nervous, tense individual, who openly nagged the child, telling him repeatedly, "Shut your mouth" (even after the physical basis of this behavior was reported to her). The mother said that the father had no sense of order, yet he expected the child to be neat and orderly. It was noted that the father had the same type of speech defect for which he was criticizing the child. When these things were explained to the parents in a series of interviews, there was a change in their attitude toward the child. This eventually resulted in a change of the child's attitude toward his school work. Months have elapsed and Robert has been promoted in school, and now appears well adjusted there and at home.

Polly's mother brought her to the clinic with the complaint that the child was disobedient. As a result of the psychiatric social worker's interview with the child's parents and the psychiatrist's interview with the child, it de-

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veloped that Polly's mother was in the habit of making promises to the child which were never kept. The mother was very talkative and would pour out an endless stream of commands at the child, many of which she did not mean. The child had become "mother-deaf." The mother was not careful to gain the child's attention before telling her what to do. The child, busy with her play, frequently did not know her mother was addressing her. The mother would allow the child to do a thing one day and punish her for doing it the next day. She would promise a reward if the child obeyed. Sometimes the child would get it, but as a rule the promise would not be kept. The mother, when angry, would make the child obey needless commands for the sake of proving her authority. The mother was told that her example should be clean cut and square; that she should take care to see that the child actually understood each time just what she wanted. It was pointed out to her that she should not interrupt an activity important to the child for a matter trivial to the mother; that in so far as possible, time should be given the child to finish an activity and warning given ahead of time. A change in her method of handling the child resulted in a marked improvement.

Carl, a fourteen-year-old boy, was referred by the Juvenile Court. He had a history of truancy, petty stealing, and finally a charge of house-breaking that brought him into court for a third time. The social worker studied the family situation and found that Carl's parents wished him to take a classical course and enter a profession. The boy, however, told the psychiatrist that he wanted to be a machinist, which was more in keeping with his intelligence and the fact that he had marked mechanical ability. It was recommended that instead of sending the boy to a reformatory he be allowed to return home on probation, but that there should be a re-arrangement of his study course at school, the emphasis being placed on manual training rather than the classics. The parents reluctantly gave up their dreams of a profession for the boy and have co-operated in the plan of treatment. Today, two years after the boy's court appearance he is happy in his school work, has a part-time job in which he makes use of the knowledge acquired in school, and is apparently happy in his home relationships. When he completes his school training, which is now largely shop work, he will be well equipped to take a job in a machine shop at a good wage.

To get at the root of such difficulties as described above usually involves giving more time and thought to the problems than the average practitioner or pediatrician with a busy practice can afford. Then is the time to call upon the child guidance clinic for help. The child guidance clinic not only offers help for parents and children, but it also brings to the aid of practitioners and all those who are interested in the physical or mental welfare of children a service which should help solve some of their most acute problems. It does not compete with the medical profession in any way. No children are received for study or treatment at the Children's Memorial Clinic except those who are referred by physicians or the agencies which support the clinic. Its justification lies in its capacity to give those interested in children a fuller picture of all that children are, think, and feel, and its ability to make them conscious of the whole child and the whole situation. Treatment means working out with parents new methods of child training; with schools, modification of teaching practices to meet individual needs; with social agencies, case-work techniques that will penetrate to the core of the difficulty; with physicians, new techniques of therapy. It can furnish to the community new data and fresh points of view, but the value of these can be proved only as they are absorbed and applied to reach all children.

NEURO-PSYCHIATRIC MANIFESTATIONS OF PUBERTY.

By ALFRED GORDON, M. D., Philadelphia, Penn.

Adolescence presents an active developmental period. It is the time of great physical and mental stress. New traits, sex interests, and new sentiments make their appearance. The brain is more active in circulation and metabolism. We have reasons to believe that the ductless glands which influence greatly the autonomic nervous system, and, therefore, the sympathetic, play normally a certain rôle in changes of disposition, mood, and, consequently, of conduct and behavior. During puberty these glands, by reason of a very active circulation, are more apt to modify the mode of feeling, and, therefore, of acting. Adolescence is a critical period of life; the coming man or

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woman cannot readily abandon the traits of the passing childhood. There is naturally a struggle. Natural tendencies are now more in evidence; they may become perverted, exalted, abolished, according to whether the combat between the infantile forces and the new requirements end in favor of one or the other. It is at this period of life when mind either reaches a new development or succumbs under the new intolerable burden. Frequently this great physiological crisis precipitates mental and nervous disorders, if the predisposition is neuropathic. In a normal condition we frequently witness a very manifest change of character; the individual may become reserved or authoritative. There may be euphorism or depression.

From a practical standpoint the chief feature of the crisis in puberty is the continuous endeavor on the part of the adolescent to adjust oneself to the new physiological and psychic forces. Should the adjustment fail, neuroses and psychoses will ensue.

Hysteria with all its physical and mental characteristics—obsessions, phobias, aboulias, hypochondriasis, anxiety, neuroses, tics, spasms —all are morbid manifestations to which an adolescent is particularly predisposed by reason of the above-mentioned peculiarities. In other words, functional nervous disorders which are psychogenetic in origin, character and evolution, find a large and a fertile soil during a period of life when feelings, emotions, or affects in general are especially mobile, and, consequently, exercise a greater influence on behavior, conduct, activities, and formation of character.

Installation of puberty is one of the most potent factors which facilitate the formation not only of neuroses but also of psychoses. Dementia praecox occupies the most conspicuous place among all. Periods of exaltation alternating with periods of depression, known under the name of cyclothymia (in a mild form) or manic-depressive insanity (in a pronounced form); is another affection not infrequently encountered in adolescence. The process of development of puberty, with its stormy changes in psychic life occurring at that period, contributes to those psychoses a special mask, character, and color.

Besides the study of specific nervous and mental disorders, there is another problem of greater magnitude which deserves our attention. It is the problem of mental deficiency which acquires a special importance from the standpoint of puberty. If this special developmental period of life is associated with important physiological and psychic changes; if sentiments, tendencies, penchants and all sorts of traits are particularly disturbed during the period of the struggle between the infantile and juvenile forces; finally, if adjustment of the former to the latter is the principal, if not the only aim, during puberal evolution,—by reason of these circumstances, a mental defect will naturally show a total disability and succumb under the tremendous burden. The result will be approximately as follows: Obtusion of moral conscience; no struggle against passions; violent impulses; no judgment; no will; ego accentuated; intolerance; strong degree of envy and jealousy; bigoted hatred; cruelty; sexuality to a pronounced degree; finally, criminality in all its forms.

Criminality, as an essential characteristic tendency of mental defectives, is one of the most important problems confronting us. Statistical studies show strikingly the effect of mental deficiency during the adolescent period of life. According to the Bureau of Education in Washington, 20 per cent leave school at puberty because of an inherent mental inability to advance. Petty and serious crimes committed by this large army of juvenile delinquents are a matter of common knowledge.

The brief survey of nervous and mental manifestations during the developmental period of puberty in normal and defective individuals leads us logically to a consideration of an outline of therapeutic and prophylactic conduct. It is obvious, of course, that intense attention to this important problem is indicated during childhood, long before the serious physiological crisis commences to develop. All our efforts must be directed towards preparing the child for that important period of life in order to enable it to meet the great conflict between various forces. The preparation must be, first of all, physical, with its normal physiological requirements; next affective, viz., all pertaining to the emotional side of the child's life. Two elements must be borne in mind; inherited constitution and influence from without.

In bad heredity, the child must be placed under favorable conditions: good nutrition; reasonable exercises; no overstrain; train re-

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sistance in case of pain and discomfort; control strong passions; train to overcome anger and worry; cultivate elevating emotions, such as hope, joy, expectations, love; they are all constructive, and must be specially insisted on. On the contrary, depressive emotions, such as despair, sorrow, are damaging to the nervous system. Joy of work compels concentration of attention. Idleness leads to nervousness. Regular systematic work is wholesome. To solve the problem of the nervous child, medicine, psychology, and pedagogy must be concerned.

The greatest therapeutic management should be undertaken in childhood and should be preeminently prophylactic. One must fight against undesirable predisposing factors which govern the destiny of the future man or woman. To strengthen the psychic forces is one of the most important measures in the course of preparation of child for the adolescent period.

1812 *Spruce Street.*

Correspondence

State Mental Hygiene Program.

RICHMOND, VA.,
JANUARY 16, 1930.

TO THE READERS OF THE MONTHLY:

In a paper on a "State Mental Hygiene Program," which I read last October at the meeting of the Medical Society of Virginia, and which was published in the December VIRGINIA MEDICAL MONTHLY, I said that such a program should have a medical background. A movement of the kind should unquestionably be led and guided by trained medical men and women.

The special purpose of this letter, therefore, is to further interest you in mental hygiene in this State. In conference with Frank Bane, Commissioner of Public Welfare; Dr. J. K. Hall, member of the General Board of the State Hospitals and Consultant Psychiatrist to the Department of Public Welfare, and also others connected with the Department, and after consulting with Dr. Charles R. Grandy, President of the State Medical Society, Dr. J. Allison Hodges, President-elect and chairman of the Department of Clinical Education of the Medical Society, and other members of the Society, it is the consensus of opinion that a small group of well qualified persons, particularly physicians, to constitute a committee on information, would very materially aid in promoting mental hygiene and psychiatry in the State. This group would consist of a few outstanding individuals whose interest and services bring them in contact with mental hygiene and psychiatric problems. The members of this committee would act as advisers and sponsors, so to speak, for the Bureau of Mental Hygiene, and aid in the dissemination of authentic information to the profession and the public relative to causes and prevention of mental illness and mental defect; they would, from time to time, at their convenience, present before the medical profession and the public, through addresses, papers, and publications, material that would further, on a sound basis, the various phases of mental hygiene. They would promote the establishment and development of neuro-psychiatric and mental hygiene clinics as part of an educational, prevention and treatment program, cooperating with the plans and purposes of the Medical Society of Virginia.

Let me call your attention to a news item in the January VIRGINIA MEDICAL MONTHLY with reference to the efforts we are making to establish a small though useful library at the headquarters of the Bureau of Mental Hygiene. Please send us any contributions that you may have made or may hereafter make, to the literature in the field in which we are especially interested.

We would be glad to give you any references that we may have to literature in the mental hygiene field; and any members of the profession or others especially interested may at any time use our library, but it would be impracticable to permit material to be sent from the library.

Fraternally yours,
WILLIAM F. DREWRY, M. D.,
Director Bureau of Mental Hygiene.

GETTING OUT THE JOURNAL

Getting out this JOURNAL is no picnic.
If we print jokes, folks say we are silly.
If we don't they say we are too serious.
If we publish original matter, they say we lack variety.
If we publish things from other journals, we are too lazy to write.
If we don't print contributions, we don't show proper appreciation.
If we do print them, the paper is filled with junk.
Like as not some fellow will say we swiped this from another journal.
And we did.

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Department of Clinical Education

OF THE MEDICAL SOCIETY OF VIRGINIA

Extension Work in Graduate Education.

The preparatory work for these courses is still continuing steadily and encouragingly. The constructive efforts recently being made by the department for initiating clinical teaching throughout the State to the members of the State Society, and to begin next Spring, will be completed at the meeting of the department on the night of February 1st, at the Commonwealth Club in Richmond. The full program cannot be given this month, but will be published in the March issue.

At first, the work will be limited to the clinical exhibits of the various hospitals in each Councilor district on certain specified weekly dates, and later, certain of these hospitals will be chosen by adjacent component societies, and more extended clinical meetings arranged according to specially advertised programs.

When assistance of any kind is desired by the local committees in charge, the Department of Clinical Education will be glad to co-operate to the full extent of its ability. It will assist in advertising the meetings, in furnishing clinical lecturers on subjects requested and in any further way the committees may desire.

The dates, local arrangements, etc., must be decided upon and, when these are definitely arranged, and the department is advised in advance, its services will be at their disposal.

All of this will require that not only the locally interested societies must encourage this movement, but that a number of local physicians individually and personally must show their interest in their fellow members, by initiating and "putting over" these clinical opportunities, for it is true in Medicine, as in all business, that "upon a few, the burthen of progress doth fall."

The need to keep all of our members "up-to-date" in the progressive methods of the present is urged, and the all-sufficient reward is the continuing advancement of our profession.

ADDITIONAL CO-OPERATION.

Since our last issue, this department has received assurance from Mr. Frank Bane, Commissioner of Public Welfare of the State, that he is "more than interested" in this program of Clinical Education, and has proposed a conference at a near date which, if favorably concluded, will afford the physicians of the State the opportunity of utilizing for clinical purposes more than 7,000 cases in the State institutions that never before have been available for clinical study by the profession as a whole. This vast and varied wealth of clinical cases of all kinds, when available, will be of the greatest advantage to all concerned, and will ultimately benefit reflexly the science of medicine and the Commonwealth of Virginia, and it will, in addition, forge and fuse the ties of co-operative effort for professional progress. Before the next issue of this JOURNAL is published, it is believed that the first of these great clinical meetings in one of our State institutions will be held, but all Southside physicians will be informed in ample time to attend.

Likewise, this department has been much pleased and encouraged by a personal letter from Hon. Harry F. Byrd, in the closing days of his brilliant regime, in which, before vacating his office as Governor, he took occasion to write: "The program appeals to me strongly, and I also will be glad to aid in any way I can."

Many personal assurances of co-operative assistance were also received by the officials of the State Society, who appeared by invitation before the recent Public Health Association of Virginia, at its annual meeting, in Richmond.

Dr. W. F. Drewry, Director of the Bureau of Mental Hygiene, has also informed this department of his earnest desire to co-operate personally, and through his staff, in any way desired, in assisting at these clinical meetings and aiding physicians of the State, who may have "problem" cases for study or diagnosis.

Surely such commendation and pledges of assistance from such sources should stir our members and component societies to offer, through these columns, their co-operation and services, for, practically, the one means the other, and together, both spell success.

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This department advocates and encourages the "acorn" method of planting a germ-nucleus, and letting it grow, for every co-operative method, however small, it is confidently believed, will aid in building the structure for continuous medical education.

The degree of co-operation will determine the measure of success.

CORRESPONDENCE.

The extracts printed below are from letters received from members of the State Medical Society, who have benefited themselves and others by organized methods for the study of local clinical cases:

Extracts from Dr. Bowyer's Letter of October 2, 1929.

. . . Being Councilor for the State Society, two years ago I organized the Clinch Valley Medical Society, comprising the seven counties, Dickenson, Buchanan, Russell, Tazewell, Scott, Lee and Wise. I invited a group of five doctors to lecture before the Society on Medicine, Surgery, Children, Obstetrics, Preventive Medicine and Public Health Work. The doctors in this section were well pleased with such a program, as they considered it a short post-graduate course. The Clinch Valley Society meets twice a year. We have had four meetings since our organization. The Society is growing. We have been able to get the doctors from the rural locations together, and they insist on the continuation of such a program . . .

Our Society has a membership of only fifty-one members. Thirty-seven of these were present, and took an active part in the discussion of all the lectures.

Extracts from Dr. A. T. Finch's Letter of October 6, 1929.

. . . I believe if you could have a series of Diagnostic Clinics in each county in conjunction with the County Medical Societies, it would prove interesting, helpful, and would stimulate the rather sleepy county Societies. We need badly to have more active county Societies, that will work and function and meet. This will educate each member, and bring him out, but so few feel it. We have struggled here for ten years, and a few of us have kept it up. We have had during the past year, more interest and more local papers, and an attendance of all of the doctors in the county on two occasions.

Extracts from Dr. A. T. Finch's letter of November 30, 1929.

. . . I think the Correspondence Courses should be a course of reading on certain lines, and then questions sent out. The U. S. Army does this in its Medical Department, and they are instructive and helpful, and I do not see why the Medical Society and Health Department and Colleges could not do a wonderful work in this line that will cement the Society and will uplift the men and be a great improvement to them, and when capped with the clinic demonstrations and lectures and papers at certain times and places, as now planned, we would really accomplish something.

I am a member of a group of twenty-five doctors who are pursuing this work in a private clinic in another city, and we arrange once a year to secure outstanding men to come one day each, and we remain a week. . . . This has worked well for three years, and has been a source of information and inspiration to us who have taken the work.

Extracts from Dr. W. H. Venable's Letter of November 22, 1929.

. . . Several weeks ago, I held a two days' clinic for colored doctors, and twelve came. They expressed great appreciation, and I am sure were much benefited. Two who were not able to attend the clinic, came at a later date, and made rounds with the staff, and watched the technic of artificial pneumothorax.

Would not other hospitals be willing to extend like privileges to the doctors in Vriginia?

LIST OF HOSPITALS IN VIRGINIA
(Except State Institutions)

Compiled from the American Medical Directory (Eleventh Edition)

(Figures at beginning of line indicate number of beds.)

FIRST DISTRICT

Councilor, Dr. R. D. Bates, Newtown, Va.

75 Martha Washington Hospital, Fredericksburg, Va.
65 Hampton Training School for Nurses and Dixie Hospital, Hampton, Va.
45 Northampton-Accomac Memorial Hospital, Nassawadox, Va.
90 Elizabeth Buxton Hospital, Newport News, Va.
68 Riverside Hospital, Newport News, Va.
20 Whittaker Memorial Hospital (colored), Newport News, Va.

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SECOND DISTRICT

Councilor, Dr. E. C. S. Taliaferro, Med. Arts Bldg., Norfolk, Va.

228 St. Vincent's Hospital, Norfolk, Va.
50 Mt. Sinai Hospital, Norfolk, Va.
150 Protestant Hospital, Norfolk, Va.
70 Sarah Leigh Hospital, Norfolk, Va.
68 King's Daughters' Hospital, Portsmouth, Va.
40 Parrish Memorial Hospital, Portsmouth, Va.
60 Lakeview Hospital, Suffolk, Va.
16 Virginia General Hospital, Suffolk, Va.

THIRD DISTRICT

Councilor, Dr. Roshier W. Miller, 2401 North Ave., Richmond, Va.

424 Medical College of Va. Hospitals, Richmond, Va.
50 Grace Hospital, Richmond, Va.
82 Johnston-Willis Hospital, Richmond, Va.
90 Retreat for the Sick, Richmond, Va.
50 St. Elizabeth's Hospital, Richmond, Va.
81 St. Luke's Hospital, Richmond, Va.
84 Sheltering Arms Hospital, Richmond, Va.
35 Southern Orthopedic Hospital, Richmond, Va.
100 Stuart Circle Hospital, Richmond, Va.
50 Tucker Sanatorium, Richmond, Va.
150 Westbrook Sanatorium, Richmond, Va.
30 Jones Memorial Hospital (colored), Richmond, Va.

FOURTH DISTRICT

Councilor, Dr. Wright Clarkson, Petersburg, Va.

26 Chase City Hospital, Chase City, Va.
48 Southside Community Hospital, Farmville, Va.
30 Hopewell Hospital, Hopewell, Va.
24 Loulie Taylor Letcher Memorial Hospital (colored), Lawrenceville, Va.
70 Petersburg Hospital, Petersburg, Va.
20 Kendig Bros. Hospital, Victoria, Va.
20 Raiford Hospital, Franklin, Va.

FIFTH DISTRICT

Councilor, Dr. J. M. Shackelford, Martinsville, Va.

100 Memorial Hospital, Danville, Va.
40 Providence Hospital (colored), Danville, Va.
30 Galax Hospital, Galax, Va.
54 Shackelford Hospital, Martinsville, Va.
20 Halcyon Hospital, South Boston, Va.
24 South Boston Hospital, South Boston, Va.
15 Dr. Akers' Hospital, Stuart, Va.

SIXTH DISTRICT

Councilor, Dr. R. A. Bennett, Bedford, Va.

25 New Altamont Hospital, Christiansburg, Va.
14 Floyd Hospital, Floyd, Va.
75 Lynchburg General Hospital, Lynchburg, Va.
75 Marshall Lodge Hospital, Lynchburg, Va.
102 Virginia Baptist Hospital, Lynchburg, Va.
45 St. Alban's Hospital, Radford, Va.
44 Burrell Memorial Hospital (colored), Roanoke, Va.
20 Gill Memorial Hospital, Roanoke, Va.
100 Jefferson Hospital, Roanoke, Va.
59 Lewis Gale Hospital, Roanoke, Va.
97 Roanoke Hospital, Roanoke, Va.
35 St. Charles Hospital, Roanoke, Va.
50 Shenandoah Hospital, Roanoke, Va.
65 Mt. Regis Sanatorium, Salem, Va.
12 Mathieson Hospital, Saltville, Va.

SEVENTH DISTRICT

Councilor, Dr. Percy Harris, Scottsville, Va.

50 Martha Jefferson Hospital, Charlottesville, Va.
10 Page Memorial Hospital, Luray, Va.
69 Winchester Memorial Hospital, Winchester, Va.
102 Rockingham Memorial Hospital, Harrisonburg, Va.

EIGHTH DISTRICT

Councilor, Dr. J. E. Knight, Catlett, Va.

50 Alexandria Hospital, Alexandria, Va.
30 Loudoun Hospital, Leesburg, Va.
25 Fauquier County Hospital, Warrenton, Va.

NINTH DISTRICT

Councilor, Dr. C. B. Bowyer, Stonega, Va.

53 Geo. Ben Johnston Memorial Hospital, Abingdon, Va.
20 Appalachia Masonic Hospital, Appalachia, Va.
50 King's Mountain Memorial Hospital, Bristol, Va.
12 Sutherland's Hospital, Clintwood, Va.
20 Clinchfield Hospital, Dante, Va.
14 St. Ann's Hospital, Lebanon, Va.
30 Norton Hospital, Norton, Va.
20 St. Elizabeth's Hospital, Pearisburg, Va.
35 Pulaski Hospital, Pulaski, Va.
30 Mattie Williams Hospital, Richlands, Va.
18 Stonega Hospital, Stonega, Va.
15 Toms Creek Hospital, Toms Creek, Va.

TENTH DISTRICT

Councilor, Dr. J. F. Fulton, Staunton, Va.

105 Chesapeake & Ohio Hospital, Clifton Forge, Va.
18 Community Hospital, Hot Springs, Va.
46 Stonewall Jackson Memorial Hospital, Lexington, Va.
12 D. J. Carroll Memorial Hospital, Schuyler, Va.
65 King's Daughters' Hospital, Staunton, Va.

COMPLIMENTARY

In appreciation of the assistance rendered this department by the profession of the State, a pamphlet containing the best summary we have seen as to deductions, instructions, etc., regarding "The Physicians' Income Tax," has been mailed to each member of the Society with the compliments of the Department of Clinical Education.

This pamphlet is a reprint by courtesy, from the *Journal of the A. M. A.*, of recent date, and it is hoped will prove of informative and practical value to our members.

INFORMATION

All members of the State Society are requested to write for any information desired on any subject relative to these Extension Courses in Graduate Medical Education, either to the Acting Executive Secretary, Mr. George W. Eutsler, P. O. Box 707, University, Virginia, or to the Chairman of the Department of Clinical Education, 5 East Franklin Street, Richmond, Virginia.

President's Message

In a recent address made before the Virginia Public Health Association, I presented two ideals which have had a profound influence on my professional career, and should have a similar influence on every medical man. One of these was the desire to increase the efficiency and prestige of the Medical Profession. Every medical society, consciously or unconsciously, must have this for its program, and its members tacitly expect this service from their societies. The question is how far is the Medical Society of Virginia able to carry out this program.

A state medical society only comes into actual contact with its members at the time of its annual meeting; indeed this was the only contact between the Medical Society of Virginia and its members under its old plan of operation, for we had then no magazine and no component societies. It really only furnished us an opportunity for an annual social gathering, where scientific papers could be read with more or less benefit to our membership at large. Outside of the one week of our meeting the Medical Society of Virginia hardly touched the lives of its members. This state of affairs was probably all that was necessary under our former individualistic manner of living, when first each family and then each community was sufficient unto itself. But our whole country has changed and Virginia has changed with it. Our roads and automobiles have brought us close together and it is no longer necessary for our people to patronize their home communities to fill their needs. We all want more and better things and we are all willing to go further to get them, even though we really have not the money to pay for them. Our people have indeed been educated to demanding as necessities things which a few years ago they considered luxuries, and with this education has come unrest and dissatisfaction with things formerly accepted as all they should be. People are combining on every side to obtain what they want and the individual can scarcely compete against these combinations. It is perfectly patent that the individual doctor will often need help under present conditions, but a medical society which only touches him one week a year is not in a position to render him much assistance.

The plan of organization adopted by the American Medical Association furnishes the means of organizing the Medical Profession so that it may be able to keep up its efficiency and prestige. The Medical Society of Virginia adopted this plan in part several years ago, and has since then gradually drawn nearer the plan as used in other states. The basis of this plan is the formation of local societies bound together into a state association, which will be able to correlate and guide the whole. Without the active local societies the state society has but little influence as it is too far off from its individual members. The county societies in Virginia vary very greatly in efficiency. We have some of these societies that meet once a week or once a fortnight and are thus in constant contact with their members. In these localities the efficiency and prestige of the profession is at its highest. There are, however, other county societies, which, although chartered, scarcely ever meet. They do not even elect officers, or delegates to the Medical Society of Virginia. They have little if any influence on the individual members who, left to themselves, have a hard struggle to keep up their prestige in the community and lose their efficiency, which needs personal contact and stimulation which can be only gotten by hearing of the work done by others. Besides this, there are fourteen counties in the State of Virginia which do not even pretend to have an organization.

It is the duty of the Councilors to establish and keep up the local organizations. They cannot, however, do so unless the physicians practicing in the various counties feel that this is worth while. They must, however, realize that unless they are willing to cooperate they will not be able to keep up their prestige, which is now more than ever necessary as the lay-press and certain organizations are even now attacking us and threatening to displace the individual doctors with State Controlled Medicine, one of whose main purposes is to reduce the cost of medical attention by reducing the doctor's pay.

The Medical Society of Virginia through its Department of Clinical Education desires to give a chance to bring up their standards to those of our members who on account of location are not given professional contacts to keep up their efficiency. It hopes to bring clinics to the neighborhood of the doctors, but it will not be able to furnish them for the benefit of one or two members. It will first be necessary to get a group of members who are ready and anxious to have such a clinic, which group is best furnished by a county medical society, which will be able to guarantee a good attendance on the clinics, and fur-

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nish the needed patients. At the beginning, the State Society will only furnish a clinic through such an organized local society.

I therefore beg the Profession in those localities which have no active county or district society to promplty get one into existence so that the State Society may be able to furnish them the material for increasing their efficiency, as well as the guidance which will increase their prestige.

CHARLES R. GRANDY, M. D.,
President, Medical Society of Virginia.

Proceedings of Societies

The Mid-Tidewater Medical Society

Met at the Citizens Exchange Bank, West Point, Virginia, at noon Tuesday, January 28th, with its president, Dr. Horace Hoskins, of Saluda, presiding.

At the regular business session, the program being inaugurated by the Medical Society of Virginia to afford clinical instruction to the country doctors was heartily endorsed and the State Society was so instructed through its representative, Dr. R. D. Bates, Councilor. A resolution was also offered and adopted requesting that our territory be given equal rights in the distribution of aid to indigent patients and that a copy of the resolution be presented to the respective legislators representing the counties.

At the afternoon session papers were presented by Dr. J. S. Horsley, Richmond, on the Modern Treatment of Burns, in which he brought out the desirability of not using ointments and other obnoxious substance in the home treatment, as it served as a handicap later, and advocated the open air and tannic acid treatment. Dr. A. I Dodson, also of Richmond, presented a paper on Ureteral Calculi and Treatment. Both of the papers were simple and practical, and made more interesting with lantern slides.

Among those present were the guests, Drs. Horsley, Dodson and J. P. Williams, of Richmond, and Drs. Bates, Hoskins, Campbell, Cox, Latane, Buckingham, Croxton and Harris, members of the society.

The meeting adjourned to meet April 22, at Mathews C. H.

M. H. HARRIS, *Secretary.*

The Fauquier County Medical Society

Was entertained by Drs. J. E. Knight and M. B. Hiden, on January 30th, at Warrenton, Va., with Dr. W. G. Trow presiding. Dr. M. B. Hiden spoke on the doctor in community activities and in politics and urged the physicians to build up their political influence and that of the medical societies. Dr. W. LeRoy Dunn, of the Virginia State Board of Health, gave an excellent talk on the Tuberculosis Clinics that are being held in that county and other counties of the State. His talk was discussed by Drs. J. E. Knight and J. T. Sprague. Dr. W. O. Bailey made a very instructive and most interesting talk on the work and program of the Loudoun County Medical Society. A committee of that society had carried through an investigation to promote the efficiency of, and to prevent infringement against, the members of the Loudoun County Medical Society. Dr. Bailey showed the great similarity between Loudoun and Fauquier counties. His talk was discussed by Dr. J. T. Sprague, who moved that Fauquier raise her medical fees by adopting the Loudoun schedule. This motion was adopted.

A delicious supper was served by Dr. and Mrs. Knight and Dr. Hiden, and a pleasant social hour enjoyed.

The Patrick-Henry Medical Society

Held its regular quarterly meeting in Martinsville, Va., January the 9th, under the presidency of Dr. W. C. Akers, of Stuart. Dr. W. N. Thompson, of Stuart, was elected secretary-treasurer, to fill the vacancy caused by the removal from the county of Dr. C. G. Bennett, former secretary-treasurer. Drs. C. W. Thomas and E. M. McDaniel, both of Martinsville, were unanimously elected to membership. Plans for the activities of the year were outlined by the president and Drs. John Shackelford, H. G. Hammond and G. B. Dudley were appointed to prepare papers for the next meeting of the Society. Following the business session, Dr. W. N. Thompson presented a paper on "The Difficulties in the Diagnosis of Anemia, with a Case Report." A general discussion of this paper by the members followed. The next regular meeting of this society will be held April 3, 1930.

The Elizabeth City County Medical Society

Held a meeting on the night of January 27th, at which time Dr. George K. Vanderslice, of Phoebus, read a paper on "Varicose Veins." This meeting was attended by doctors from Hampton, Fort Monroe, Langley Field, and the National Soldiers Home. Dr. Paul J. Parker, Hampton, is president of the

society, and Dr. William H. Howard, also of Hampton, is secretary.

The Alexandria Medical Society,

At its January meeting, elected the following officers for 1930: President, Dr. R. L. Wilkins; vice-president, Dr. O. A. Ryder; secretary-treasurer, Dr. Peter B. Pulman (re-elected). All officers are of Alexandria, Va.

The Albemarle County Medical Society,

At its regular meeting held at the University of Virginia on January the 9th, elected the following officers for the ensuing year: President, Dr. D. C. Smith, University; vice-president, Dr. W. W. Waddell, University; secretary-treasurer, Dr. A. D. Hart, Charlottesville.

The Lynchburg and Campbell County Medical Society,

At a recent meeting, elected Dr. Robert P. Kelly president for the year 1930. Dr. Don P. Peters was elected vice-president, and Dr. Charles P. M. Sheffey, secretary-treasurer. All officers are of Lynchburg.

The University of Virginia Medical Society

Met on January 13, 1930, in the new Medical Building at the University. The meeting was called to order by the President, Dr. Edwin P. Lehman. A typical case of alcoholic paranoia was presented by Dr. D. C. Wilson and discussion was led by Dr. Paul Anderson, of Richmond. Dr. Lehman presented the second clinical case, that of gangrene of the toes in a young white woman, evidently the result of some circulatory disease. The case had improved under intravenous injection of typhoid vaccine.

Dr. Thelma F. Brumfield demonstrated the pathological material of a case of rupture of esophagus; the clinical aspects of case with X-ray findings were discussed. Dr. Fletcher Woodward reviewed briefly the anatomy, pathology and symptoms of cardiospasm.

The main paper of the evening was given by Dr. Kenneth Maxcy, Professor of Public Health and Hygiene, on *Typhus Fever in the United States.* His paper included a brief history of the disease, the clinical manifestations and his personal contributions to the study of the epidemiology. A brief business meeting closed this session.

It was a pleasure to have with us some of the members of the Albemarle County Society and we extend to the members of the Medical Society of Virginia a cordial invitation to meet with us. The next regular meeting is to be held January 27th, at 7:30 P. M. It was announced that at the following meeting on February 10th, the interesting Harvey Film will be shown through the kindness of Dr. Charles H. Frazier, of Philadelphia.

J. B. Graham, M. D.,
Secretary.

Woman's Auxiliary, to the Medical Society of Va.

Official Health Program of the Woman's Auxiliary of the American Medical Association

I. Public Hygiene.

Fundamentals upon which auxiliary work for improvement of public hygiene should be based:

(1) *Recognition of the fact that* public health work is a highly technical job, requiring scientific, technically trained workers. That health work undertaken by lay women with no knowledge of the public health problem as a whole is necessarily fragmentary and ineffective.

(2) *Recognition of the fact that* every State, county and city is entitled to a scientific full-time health department (organized not to treat the sick, but to prevent disease and promote health), adequately financed, free from political domination, and providing continuity of service to a trained personnel so long as work is efficient.

(3) *Recognition of the fact that* the first and most fundamental job for lay organizations like the Auxiliary is to secure such scientific full-time health departments and adequate health protection, in their State, their county, their city or town.

(4) *Recognition of the fact that* where efficient, full-time scientific health departments do not exist (and only about ten per cent of the rural districts of the United States have anything approaching adequate health protection), health activities must be initiated and carried on by volunteer unofficial agencies; but that all such work should be so planned and administered as to serve as stepping-stones toward the full-time official health department, and that when the full-time official health department, with workers trained for public

health work, has become an accomplished fact, lay organizations should support and cooperate with the official workers and should be willing to take orders from them.

(5) *Recognition of the fact that* no health department, State, county or city, can do effective work without intelligent cooperation of the public; and that such public cooperation depends upon widespread health education; that lay organizations can do this educational work, and are needed for it; and that the Auxiliary can be one of the most valuable tools for an official health department to use in this work, because it can by its education of the public concerning the official health department's work and needs, be the means of gradually eliminating or preventing political interference with an efficiently working department, and thus insure to it uninterrupted public service.

Most volunteer agencies do not yet realize the wastefulness of their individualistic efforts. One of the first things the Auxiliary should do is to work for a change of attitude in other volunteer women's organizations.

Health officials know that it is not always the work which makes the greatest emotional appeal to the public which most needs to be done. Unfortunately most women do *not* know this. This is something the doctors' wives might well undertake to teach other women.

The National Auxiliary recommends, therefore, that each State Auxiliary undertake, under the direction and with the help of the Public Health Committee of the State Medical Association and of its Advisory Council a study *first of all* of the fundamental principles of health promotion and disease prevention; second, of the set-up considered essential by public health experts for an effective State health department, of qualifications of personnel, adequate budget, and the like; and third, of the State health conditions; that it devise means of acquainting all the State board members with the result, and that recommendations for educational work by the county Auxiliaries be based upon the conditions found.

In States where all is well and where time has developed good official health machinery and good health conditions, general knowledge of the fact will tend to prevent interruption of the excellent work, and will be a source of satisfaction to the women of the State.

In those States where there is much yet to be done, this investigation will indicate what sort of work needs doing first. For example:

(a) In those States which are not in the Birth Registration Area, the Auxiliaries would, without doubt, wish to tackle, as their first job, the ninety per cent birth registration problem.

(b) In those States in which the State health department believes the "County Health Unit" to be the solution of the rural health problem, the county auxiliaries should be encouraged to take as their chief work such persistent and widespread education of the public as will gradually create a general demand for the full-time county health department.

(c) In those States where the rural health work is directly done "long distance" by the State health department, the county auxiliaries, if willing to work, and work under the directions of the State health department, can carry on intensive local health educational work which would be impossible for the State department without intelligent local cooperation.

To those auxiliaries which agree with these ideas the committee recommends the following outline of study:

(1) Vital statistics. Their value.

Compare the vital statistics of the State with those of other States.

Compare the vital statistics of the different counties of the State.

Compare the vital statistics of the cities with other cities in the State, and in the United States.

(2) The State Health Department; its organization, and program:

(a) For general state work.

(b) For cooperating with the counties in improving county health conditions.

(3) The value of the Public Health Nurse.

(4) The County Health Unit as a possible solution of the rural health problem.

Community-wide Conditions Which Affect Health.

(5) Milk:

Milk standards, why necessary, what milk standards your community needs. How are these needs being met?

(6) Housing:

Your community housing laws.

Housing conditions as they have developed under these laws and as they affect health.

Improvements needed.

(7) General sanitation and its relation to the death and morbidity rates.

Sewage disposal.

Water.

Garbage.

Flies.

Dust and street cleaning, etc.

II. Personal Hygiene.

The improvement of personal hygiene in any community is almost entirely a matter of education. Here again the Auxiliary members must first educate themselves before they can take a safe part in educating the public. The committee, therefore, recommends that the Auxiliary study programs shall include such subjects as:

Health Promotion:

Prenatal care.

Child Welfare—infant and pre-school hygiene.

School hygiene.

Mental hygiene.

Social hygiene.

The advantage to the public of general compliance with health regulations.

The periodic health examination.

Control of communicable diseases.

The entire program should close with a survey of all the private agencies doing health work in the community, and a discussion of the possibility and desirability of centering the direction of all such work in a full-time, scientific health department, under which the private agencies, while still maintaining their identity, would work in complete cooperation.

The Truth About Medicine

In addition to the articles enumerated in our letter of November 29, the following have been accepted:

E. Bilhuber, Inc.

Lenigallol—Zinc Ointment.

Cutter Laboratory.

Scarlet Fever Streptococcus Antitoxin—Cutter.

Mead Johnson & Co.

Mead's Viosterol in Oil 100 D.

H. K. Mulford Co.

Ampules Sodium Cacodylate—Mulford, ¾ grain, 1 c.c.

Ampules Sodium Cacodylate—Mulford, 3 grains, 1 c.c.

Ampules—Sodium Cacodylate—Mulford, 5 grains, 1 c.c.

Winthrop Chemical Co., Inc.

Tablets Tutocain No. 6.

The following article has been exempted and included with the List of Exempted Non-medicinal Articles (New and Non-official Remedies, 1929, p. 485):

Child Welfare Guild, Inc.

Bite—X.

NEW AND NON-OFFICIAL REMEDIES

Gelatin Compound Phenolized—Mulford.—A mixture composed of gelatin, zinc oxide, glycerin, and water, containing 1.5 per cent of phenol. It is used in the preparation of bandages to cover chronic ulcers, unhealed secondary burns and the preparation of pressure bandages for varicose veins when surgical treatment is not necessary. H. K. Mulford Co., Philadelphia.

Diphtheria Toxoid—Mulford, 30 c.c. vial.—Diphtheria Toxoid—Mulford (New and Non-official Remedies, 1929, p. 369) is also marketed in packages of one 30 c.c. vial. H. K. Mulford Co., Philadelphia.

Typhoid-Paratyphoid Prophylactic, Hospital Package.—Typhoid paratyphoid prophlactic (New and Non-official Remedies, 1929, p. 379) is also marketed in hospital size packages containing ten complete immunizations. The Cutter Laboratory, Berkeley, Calif.

Ampoule Solution Silver Nitrate 1 per cent—Cutter.—Solution silver nitrate 1 per cent, approximately 0.2 c.c., contained in ampules composed of beeswax. They are used for the prevention of ophthalmia neonatorum. Cutter Laboratory. Berkeley, Calif.

Merthiolate.—Sodium Ethylmercuri Thiosalicylate.—Merthiolate contains from 49.15 to 49.65 per cent of mercury in organic combination. Merthiolate is a potent germicide for spore-bearing and non-spore-bearing bacteria. It is used for sterilizing tissue surfaces. It does not precipitate with serum proteins. Merthiolate is much less toxic than mercuric chloride. Merthiolate is supplied in the form of merthiolate solution 1:1,000, containing 1 gram of merthiolate in 1,000 c.c. of water, buffered with 1.4 Gm. of sodium borate in 1,000 c.c. and containing sodium chloride to make the solution approximately isotonic. Eli Lilly & Co., Indianapolis. (Jour. A. M. A., December 7, 1929, p. 1809.)

Polyanaerobic Antitoxin.—An anaerobic antitoxin (New and Non-official Remedies, 1929, p. 346) prepared by immunizing horses with the toxins of **B. tetani, B. Welchii, Vibrion septique** and **B. oedematiens.** It is marketed in bottles containing 100 c.c., each 100 c.c. containing at least 5,000 units of tetanus antitoxin, 75 units of Welch bacillus antitoxin, and sufficient antitoxin to neutralize 50,000 minimum lethal doses of **Vibrion septique** toxin and 100,000 minimum lethal doses of **B. oedematiens** toxin. Cutter Laboratory, Berkeley, Calif.

Normal Horse Serum Without Preservative.—A normal horse serum (New and Non-official Remedies, 1929, p. 344) marketed in packages of one vial containing 100 c.c. H. K. Mulford Co., Philadelphia.

Pollen Extracts—Mulford.—The following pollen extracts—Mulford (New and Non-official Remedies, 1929, p. 33) have been accepted: Ader Pollen Extract—Mulford; Alfalfa Pollen Extract—Mulford; Annual Sage Pollen Extract—Mulford; Apple Pollen Extract Mulford; Aster Pollen Extract—Mulford; Blue Beech Pollen Extract—Mulford; Boneset Pollen Extract—Mulford; Brown Grass Pollen Extract—Mulford; Burning Bush Pollen Extract—Mulford; Burweed Marsh Elder Pollen Extract—Mulford; Buttercup

Pollen Extract—Mulford; California Mugwort Pollen Extract—Mulford; Careless Weed Pollen Extract—Mulford; Cedar Tree Pollen Extract—Mulford; Clover Pollen Extract—Mulford; Crab Grass Pollen Extract—Mulford; Dahlia Pollen Extract—Mulford; Dragon Sage Pollen Extract—Mulford; Elm Tree Pollen Extract—Mulford; English Plantain Pollen Extract—Mulford; Fescue Pollen Extract—Mulford; Golden Glow Pollen Extract—Mulford; Hickory Tree Pollen Extract—Mulford; Milo Maize Pollen Extract—Mulford; Mock Orange Pollen Extract—Mulford; Oat Pollen Extract—Mulford; Olive Pollen Extract—Mulford; Pecan Tree Pollen Extract—Mulford; Pine Tree Pollen Extract—Mulford; Poverty Weed Pollen Extract—Mulford; Prairie Grass Pollen Extract—Mulford; Privet Pollen Extract—Mulford; Quack Grass Pollen Extract—Mulford; Rabbitt Brush Pollen Extract—Mulford; Rose Pollen Extract—Mulford; Salt Bush Pollen Extract—Mulford; Shad Scale Pollen Extract—Mulford; Sheep Sorrel Pollen Extract—Mulford; Slender Ragweed Pollen Extract—Mulford; Spring Amaranth Pollen Extract—Mulford; Sudan Grass Pollen Extract—Mulford; Velvet Grass Pollen Extract—Mulford; Western Giant Ragweed Pollen Extract—Mulford; Wheat Pollen Extract—Mulford; Wild Oats Pollen Extract—Mulford; Willow Tree Pollen Extract—Mulford; Winter Grass Pollen Extract—Mulford; Yellow Foxtail Grass Pollen Extract—Mulford. These pollen extracts are marketed in 5 c.c. vials containing 500 units per c.c. H. K. Mulford Co., Philadelphia.

Thompson's Maltose and Dextrin.—A mixture containing maltose, 51 per cent; dextrins, 45 per cent; sodium chloride, 2 per cent; and moisture, 2 per cent. On the claim that maltose is more readily assimilated than other forms of sugar, Thompson's maltose and dextrin is proposed to supplement the carbohydrate of cow's milk or of water modifications of cow's milk. Thompson's Malted Milk Co., Inc., Waukesha, Wis. (Jour. A. M. A., December 21, 1929, p. 1971.)

PROPAGANDA FOR REFORM

Irradiated Ergosterol.—Lest there still remain any misunderstanding, it should be recalled that the therapeutic virtues of cod liver oil are by no means to be identified with irradiated ergosterol; for the liver oil is rich in vitamin A, which is in no way identical with the antirachitic properties of the irradiated ergosterol. The publicly announced statements that solutions of irradiated ergosterol represent the long desired "synthetic cod liver oil" are utterly misleading except as the viamin D component is concerned. Irradiated ergosterol cannot replace butter—a common source of vitamin A—though it may supplement the valuable milk fat. When a highly potent substance such as irradiated ergosterol becomes readily available, it behooves us to consider carefully whether a danger of overdosage exists. While there appears to be a liberal range between a physiologically beneficent intake and a possibly injurious overdose, there can no longer be much doubt that massive doses of irradiated ergosterol may result in considerable impairment of nutrition, loss of weight, pronounced hypercalcemia, and abnormal calcium deposits in certain tissues and organs. Investigators in the U. S. Public Health Service state that irradiated ergosterol is no doubt a useful drug and one endowed with great potency, but not without possible harm in the hands of the unsuspecting. Probably this is true also, the investigators add, of the haphazard consumption of foodstuffs that have been subjected to the action of ultraviolet rays. (Jour. A. M. A., June 15, 1929, p. 2023.)

Book Announcements

Practical Psychology and Psychiatry. For Use in Training-Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. BURR, M. D. Late Medical Director Oak Grove Hospital (Flint, Mich.), for Mental and Nervous Diseases; Member of the American Psychiatric Association, etc. Sixth Edition. Revised and Enlarged, with illustrations. Philadelphia. F. A. Davis Company. 1930. Octavo of 378 pages. Cloth. Price, $2.75 net.

A Textbook of Physiology for Nurses. By WILLIAM GAY CHRISTIAN, M. D., Professor of Anatomy, Medical College of Virginia. And CHARLES C. HASKELL, B. A., M. D., Professor of Physiology and Pharmacology, Medical College of Virginia. Second Edition. St. Louis. The C. V. Mosby Company. 1929. Octavo of 153 pages. Illustrated. Cloth. Price, $2.00.

Getting Well and Staying Well. A Book for Tuberculosis Patients, Public Health Nurses, and Doctors. By JOHN POTTS, M. D., Fort Worth, Texas. Introduction by J. B. McKNIGHT, M. D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium. Second Edition. St. Louis. The C. V. Mosby Company. 1930. Octavo of 221 pages. Cloth. Price, $2.00.

Symptoms of Visceral Disease. A Study of the Vegatative Nervous System in its Relationship to Clinical Medicine. By FRANCIS MARION POTTENGER, A. M., M. D., LL. D., F. A. C. P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Author of "Clinical Tuberculosis," etc. Fourth Edition. St. Louis. The C. V. Mosby Company. 1930. Octavo of 426 pages with eighty-seven text illustrations and ten color plates. Cloth. Price, $7.50.

Additional Studies of the Arts, Crafts, and Customs of the Guiana Indians. With Special Reference to Those of Southern British Guiana. By WALTER E. ROTH. Smithsonian Institution. Bureau of American Ethnology. Bulletin 91. U. S. Government Printing Office, Washington, D. C. 1929. Octavo of 110-xvii pages. Illustrated. Cloth. For sale by the Superintendent of Documents, Washington, D. C. Price $1.00.

Book of Diets. Bulletin published Quarterly by the Staff, McGuire Clinic, St. Luke's Hospital, Richmond, Va. Second Edition, Revised. January, 1930. Octavo of 48 pages. Paper.

As was announced in the last bulletin, this edition of the Books of Diets is published as Volume II, No. 1, of the bulletin. In the main, the original form has been adhered to, but the editors have felt that certain modifications would be definite improvements.

Special effort was made in preparing this book to keep it a manual rather then have it a text-book on dietetics. Attention was given to the selection of a variety of available foods so that proper diets might be selected for all patients whether rich or poor, urban or rural.

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Editorial

The Use of Dextrose in Pneumonia.

Maclachlan and associates* direct attention to the use of dextrose in the treatment of pneumonia cases. In 1914 a French writer brought out the advantages of this aid in pneumonia treatment. He gave a 25 per cent solution intravenously three or four times daily using 250 c.c. each time. The method was taken up, as is known, by workers in this country; and favorable conclusions were drawn It was thought to be helpful as a food and as a heart stimulant. Two English physicians, in 1925, gave 200 to 500 grams of dextrose by mouth in lemonade in each twenty-four hours. Other workers adopted the method in toxic conditions as well. Some studies on toxic myocardium phenomena, by dextrose given intravenously, were favorable in that heartbeats were restored when other methods had failed. Germans have been in favor of intravenous dextrose in angina pectoris. Other workers have held that digitalis action is improved by associated use of dextrose.

Our authors recommend the following as the best way to administer dextrose in pneumonia: Give from 400 to 600 gm. of dextrose by mouth each day. They find that this can be done by dissolving 200 gm. of dextrose (Dextrose Powder—Corn Products Company) in 1000 c.c. of water and to this add the juice of 2 to 3 lemons. This represents 800 calories and it is "very palatable." The patients are induced to drink 2 to 3 liters each 24 hours, making 1600 to 2400 calories. If patient is unable to take the above amounts, a 25 per cent solution of dextrose is given intravenously four to six times each 24 hours, using no more than 200 c.c. each time. The workers give interesting tables showing the favorable experiences in this method and to the article is appended bibliographic references of interest.

*Maclachlan & Others. A. J. M. Sc. January, 1930. Page 963.

Carbon Dioxide Inhalation in the Treatment of Pneumonia.

The mid-winter and late-winter season brings the profession each year face to face with unconquered problems of pneumonia. Many of the infections have yielded. Like typhoid fever and diphtheria, professional and scientific knowledge has about brought certain nation-wide infections to a minimum of incidence. This has come about through the conquering effect of preventive and therapeutic medicine, but undiminished, pneumonia remains a disease of the winter season with a high mortality. It is indeed interesting and intriguing to note the suggestion that possibly failure to make a dent in the ever-recurring advance of pneumonia may be due to lack of consideration of factors not heretofore recognized. Studies have been vigorous and widespread in the problems of bacteriology and serology and preventive medicine, but the factors brought to light in these fields have left a disease quite as deadly as it was a half-century ago. In the face of want of success, there are those who raise the question that there may be or must be other matters in the treatment not yet brought to light; or not yet applied. It is with some sort of suggestive slant as this that one may peruse the article by Yandell Henderson and others* on the treatment of pneumonia by inhalation of carbon dioxide. Upon the idea that "pneumonia may involve some factor that is not concerned in other diseases," these workers have presented their publication.

After all, one must look upon pneumonia as an intensive infection, attacking an organ's active function, with a short and definitely clear-cut duration. It is a disease of strangle and obstruction. It blocks and obstructs and occludes a drainage system of the lungs. The disease combats the surgical principle: drainage. Upon this principle of surgery is founded much of the achievement of that great specialty. While drainage of infection by surgical means has been widely used in various phases of surgery, the drainage of infection from the lungs has been brought to the fore by the suc-

*Archives of Internal Medicine—Vol. 45, No. 1, pg. 72.

cessful use of the bronchoscope. With the airways opened and drained by bronchoscopy, many infections of lungs have been cured.

Our authors bring out the part played by atelectasis in pnuemonia; they point out the relation of the infection to the atelectasis, created through inadequate drainage. The occlusion of respiratory passages adds to the virulence of the pneumonia. It becomes a critical factor in the brief days of self-limited pneumonia. This is shown by experimental and clinical evidence. The normal drainage is stopped in pneumonia. Pneumonia after asphyxia, with rales, edema and bronchopneumonia, falls within the same principles of occlusion of drain-ways. Atelectasis and pneumonia in the newborn, as well as post-operative pneumonia, likewise come under the same condition of inadequate drainage.

Effectiveness of the inhalation of carbon dioxide is due to the deep breathing induced. It is this principle that explains the effectiveness of the treatment of carbon monoxide asphyxia by inhalation of oxygen and 5 per cent carbon dioxide in the prevention of pneumonia. Likewise, it has been shown that inhalation of carbon dioxide at the termination of general anesthesia prevents post-operative pneumonia as brought about by the same process. Henderson's and Haggard's work in the treatment of asphyxia during anesthesia is well known. They introduced the treatment as a stimulant of respiration, thus expediting drainage of occluded air passages. The use of carbon dioxide in pneumonia, as shown in this report, is indeed highly suggestive of a new factor in fighting this disease. Several hundred, they state, have been treated with oxygen and 5 per cent carbon dioxide. Inhalators used in resuscitating patients with carbon monoxide asphyxia were employed. In one group of 126 cases of pneumonia, only nine died. Besides, a number came to a crisis immediately after inhalation was instituted. More important still is the fact that patients treated early all recovered; the deaths occurred in the cases treated late in the attack.

Oxygen Therapy in Pneumonia.

Anoxemia is one of the factors of the pneumonia problem. And anoxemia is not only a state of the pulmonary blood, but also of the heart and general system. Metabolism, resistance, cardiac response and endurance, cerebral stimuli may all be influenced by deficient aeration of the blood. Physiological action, under the effect of anoxemia of pnuemonia, brings about a depression of those functions that are so essential in the short and limited time in deadly pnuemonia. Before the crisis, toxemia, anoxemia, cardiac failure and cyanosis may combine to kill. Guedel* and others have drawn attention to anoxemia and oxygen therapy in pneumonia. Experience during the past few years appears to favorably impress one with the great help of oxygen therapy, administered early and throughout attacks of pneumonia.

The mechanism of oxygen therapy should be understood because there appears to be certain essential details, necessary of application, in order to bring about proper absorption of oxygen into the blood. Elevation of partial pressure of oxygen in the "atmospheric environment" of the patient, thereby forcing a greater quantity of oxygen through the alveolar membrane into the blood is an important desideratum of oxygen administration in pneumonia. Early administration is also an important point in its successful use. To await anoxemic symptoms is to await toxic phenomena; in other words, oxygen to be of value must be in place early in pneumonia. Oxygen is needed when its administration improves the heart and respiratory status of the patient and comforts and rests the pneumonic patient. "Keep the finger-nails pink" is a standard of treatment and a slogan of action.

The 20 per cent oxygen of atmospheric air forces ample diffusion through the normal lung and an atmosphere containing from 30 to 50 per cent of oxygen appears to be adequate in removing anoxemic signs in pneumonia Oxygen, under this pressure, should be given nearly constantly during the course of the disease; after all the crisis, because of untoward anoxemiac effects, may bring about acute heart failure. The patient should be told, with reassuring tones, that oxygen administration is not a last resort but that it is given early in order to keep off serious complications.

The oxygen tent and oxygen meter devised after Guedel is an excellent method of accomplishing adequate oxygen administration in pneumonia.

Post-Operative Pneumonia.

Henderson and Haggard, and Coryllos† have shown by their work and publications striking

*J. A. M. A., Vol. 92, No. 14, Page 1152.
†J. A. M. A., Vol. 91, No. 2, Pages 95 to 100.

effects in prevention and cure of pneumonia (post-operative) by carbon-dioxide administration. No internist or physician can afford to neglect a careful study of their work. In the presence of the high incidence and dreadful mortality of an unconquerable disease, such as pneumonia has proven to be by all bacterial, serologic and drug-methods of treatment, one should give serious consideration to a new start and line of attack as described by the work of these men.

News Notes

Dates Set For Norfolk Meeting of Medical Society of Virginia.

The Council of the Medical Society, at its mid-winter meeting held in Richmond, February the 1st, was well attended and selected October 21, 22 and 23, 1930, as the dates for our annual meeting in Norfolk. Every effort was made to avoid conflict with the dates of other medical organizations. This gives promise of being an unusually interesting meeting and we hope our members will make their plans to attend.

The Norfolk County Medical Society recently appointed the following doctors as a committee on arrangements for this meeting: Dr. W. L. Harris, chairman, with Drs. R. L. Payne, Claiborne Willcox, F. C. Rinker and E. T. Hargrave as associates.

The Virginia Public Health Association

Met in Richmond, January 9, 1930. The principal speakers from outside were Mr. Homer N. Calver, Executive Secretary of the American Public Health Association, who talked on "The Functions of a State Health Association," and Dr. Blanche Haines, of the United States Children's Health Bureau, who gave an interesting talk on "Presidential Interest in Child Health." Dr. Charles R. Grandy, President of the Medical Society of Virginia, gave an excellent paper on "Cooperation between the Physician and the Health Worker." Dr. J. Allison Hodges, President-elect of the Medical Society of Virginia, talked on the same subject. The attendance of these men and their talks were much appreciated. The relationship between the two societies cannot but be very cordial during the next and future years.

Dr. W. Brownley Foster, President of the Association, gave an interesting paper on "Negro Mortality" as his presidential address. Dr. C. L. Outland spoke on "Hospitalization of Contagious Cases." A very full and masterly paper on the "Diagnosis of Scarlet Fever" was read by Dr. L. E. Sutton, Jr., and Dr. Fred J. Wampler demonstrated the migration of the ascaris larvae through the lungs of guinea pigs.

Dr. B. B. Bagby, of Courtland, was elected president for the ensuing year. Dr. P. M. Chichester, of Clarendon, was elected first vice-president, and Dr. L. J. Roper, of Portsmouth, second vice-president. Dr. Fred J. Wampler remains secretary-treasurer for another year. Miss Rowena Kneebone, of Richmond, was elected assistant secretary-treasurer. Dr. Wampler was elected the Association's representative on the Governing Council of the American Public Health Association.

The American College of Surgeons,

Virginia, West Virginia, Maryland and District of Columbia Sectional meeting, was held in Richmond, Va., January 9th and 10th. There was an attendance of about 250 surgeons, surgical nurses and hospital officials for this meeting and the Hospital Standardization Conference held at the same time. The local committee in charge of arrangements was composed of Dr. Carrington Williams, chairman, and Drs. Robt. C. Bryan, Chas. R. Robins, G. Paul LaRoque, Greer Baughman, W. Lowndes Peple, Frank S. Johns, A. C. Sinton, Jr., and Karl S. Blackwell. This was an excellent conference. Clinics were held during the morning hours of both days, at the various hospitals throughout the city, as were also Hospital Standardization conferences, clinical addresses and demonstrations; scientific sessions were held in the afternoons. All members of the College were guests for luncheon on the first day at the home of Dr. Stuart McGuire. That evening, a subscription dinner was held, which was followed by short addresses and the showing of both talking and silent motion pictures. A community health meeting, open to the public, was held on the second evening.

Drs. Robert Greenough, of Boston; George W. Crile, of Cleveland, and Willis G. Campbell, of Memphis, were the distinguished visitors present.

Officers selected for the various states are as follows:

VIRGINIA: Chairman, Dr. Clarence Porter Jones, Newport News; secretary, Dr. Carring-

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ton Williams, Richmond; councilor, Dr. Southgate Leigh, Norfolk.

West Virginia: Chairman, Dr. W. A. MacMillan, Charleston; secretary, Dr. J. Ross Hunter, Charleston; councilor, Dr. H. L. Goodman, Ronceverte.

Maryland: Chairman, Dr. Arthur M. Shipley, Baltimore; secretary, Dr. Richard G. Coblentz, Baltimore; councilor, Dr. James M. Dick, Salisbury.

District of Columbia: Chairman, Dr. R. M. LeComte; secretary, Dr. E. W. Titus; councilor, Dr. William B. Marbury, all of Washington.

It is planned to hold the next meeting of this section in Baltimore in January, 1931.

Mental Hygiene Congress, May 5th to 10th, Washington, D. C.

Problems involving disorders of the human mind and the consequences will bring together psychiatrists, mental hygienists, neurologists, general medical practitioners, psychiatric social workers and nurses, educators, lawyers, public welfare administrators, and others, in a meeting in Washington, D. C., May 5th to 10th. The First International Congress on Mental Hygiene, the American Psychiatric Association and the American Association for the Study of the Feebleminded will be the participants. Such a mobilization of forces from all parts of the civilized world, to make an organized fight against mental disease and allied conditions that distress and retard the human race, is a most significant and important event in world progress in behalf of mankind.

The purpose of the Congress may be summarized as follows:

To exchange information and experience and consider individual and social problems growing out of mental and nervous disease, mental defect and mental and emotional maladjustments of the individual to his personal and social environment.

To consider ways and means of more effective promotion of mental hygiene in the various countries of the world.

To endeavor to correlate the special knowledge and experience of psychiatrist, psychologist, psychiatric social worker, occupational therapist, public administrator, educator, sociologist and those of related professions in determining how best to care for and treat the mentally sick, to prevent mental illness and to conserve mental health.

To endeavor to determine upon the objectives for the organized mental hygiene movement. To create world interest in mental hygiene and to establish more generally the fact that mental disease can in large measure be prevented and that greatly increased governmental and philanthropic expenditure for mental health is sound public policy.

An outline of the preliminary program challenges the attention of every intelligent reader concerned with mental health, prevention of mental and nervous disease and mental defect, and with abnormal human conduct. Some of the topics to be discussed are the following:

Magnitude of the mental hygiene problem as a health problem.

Organization of community facilities for prevention, care and treatment.

Organization of the mental hospital and its role in community life.

Psychopathic hospitals and psychopathic wards in general hospitals.

Organization of special types of clinical service as in courts, out-patient departments of hospitals and colleges.

Community clinics.

School clinics.

Clinical and social research in the field of mental hygiene.

Teaching of mental hygiene and psychiatry in the medical schools.

Mental hygiene in industry, personnel work and vocational guidance.

Psychiatric social work and nursing.

Mental hygiene aspects of delinquency, dependency and other types of social maladjustments.

Social aspects of mental deficiency.

Methods and possibilities of the child guidance clinic.

Parent and teacher training.

Problem of the pre-school period.

Significance of mental hygiene problems for the future of the child as individual and as citizen.

Programs of both technical and popular addresses and discussion conducted by the American Psychiatric Association and the American Association for the Study of the Feebleminded will, as they always do, appeal to the medical profession and to those individuals directly

concerned with the mentally diseased and the mentally defective.

The committee on organization of the Congress, which has representation from Virginia, acting for the National Mental Hygiene Association and agencies and related organizations throughout the work interested in better mental health for all people, desires cooperation of government, private organizations and individuals in promoting this public mental health movement, which is sponsored by many exceptionally able men and women. These meetings in Washington, so near to Virginia, offer an unusual opportunity to physicians and others in this State, and many will doubtless attend. The out-put of the Congress and the two national associations, meeting conjointly, will materially help the efforts of the Mental Hygiene Bureau of the State Department of Public Welfare, which already has the support of the Medical Society of Virginia.

The administration secretary of the Congress, from whom all information may be had, is Mr. John R. Shillady, 370 Seventh Avenue, New York, N. Y.

Petersburg Hospital Staff.

Dr. George H. Reese has been elected chairman of the staff of physicians of the Petersburg (Va). Hospital for the coming year. He succeeds Dr. Mason Romaine whom the staff recommended for membership on the hospital board of directors for a three-year term. Other officers of the physicians' staff are: Dr. Fletcher J. Wright, vice-chairman; Dr. Philip Jacobson, secretary; Dr. Wm. A. Reese, vice-secretary.

Miss Montez Wayne, whose hospital experience covers a period of ten years in large hospitals, has been appointed superintendent of the Hospital, to succeed Miss Isabel Simpson who recently resigned to accept the superintendency of the Southern Orthopedic Hospital, Richmond. Miss Wayne enters upon her duties on the 14th of this month.

Dr. M. L. Dalton,

For sometime of Floyd, Va., has located at Montvale, Va.

Dr. W. M. Junkin,

Recently of Richmond, Va., where he was connected with the surgical department of McGuire Clinic, has located in Elkins, West Virginia, where he is connected with the surgical staff of the Davis Memorial Hospital.

Doctors Among Bank Directors.

The following Virginia doctors are among those recently noted as directors of banks for the current year: Drs. James L. Hamner and H. C. Rucker in the Union Bank and Trust Company of Amelia; Drs. C. S. Dodd and J. M. Williams in the City Savings and Loan Corporation of Petersburg; Drs. Thomas B. Latane and A. W. Lewis in the Southside Bank which has branches at Tappahannock, Aylett and Walkerton; Drs. F. F. Davis and J. W. D. Haynes in the First National Bank of Gloucester; Dr. L. K. Leake in the Bank of Goochland; Dr. John W. Scott in the National Bank of Gordonsville; Dr. H. A. Spitler in the Middleburg National Bank; Dr. W. W. Wilkinson in the Bank of South Hill; Dr. W. P. Jones in the Bank of Middlesex; Dr. H. L. Segar in the Northern Neck State Bank at Warsaw.

Dr. James L. Hamner,

Mannboro, Va., who has been quite sick in the Petersburg Hospital, with pneumonia, is now much improved.

Dr. Reid White, Jr.,

Lexington, Va., has been elected surgeon to Camp Frank Paxton, Sons of Confederate Veterans, in that place.

Pan-American Conference of Child Hygiene.

The Sixth Pan-American Conference of Child Hygiene will meet at Lima, Peru, July 4 to 11, 1930. The Honorable Augusto B. Leguia, President of Peru, is Honorary President of the conference; Dr. Sebastian Lorente, Director of Health of Peru, is President; and Dr. Carlos Enrique Paz Soldan, Honorary Director of the Pan-American Sanitary Bureau, is Secretary-General.

The subjects for discussion will be divided as follows:

Group I. General medical questions: (a) Medicine; (b) Surgery; (c) Hygiene.

Group II. General social questions: (a) Relief; (b) Legislation; (c) Education.

It is expected that delegates from all the American Republics will be present.

Fewer Children in California's Institutions for Dependent Children.

California believes in home care for children. A decided decrease since 1913 in the population of institutions for dependent children has been brought about by the increased use of financial aid to children in their own homes, foster-home care, and adoption, accord-

ing to the first biennial report of the department of social welfare of the State. About seven-eighths of the children now in the institutions have one or both parents living; most of the orphans have been placed for adoption. The hope in the case of children with one or more parents is, of course, that the family life may be reestablished.

Health Conditions in the United States During the Past Year.

Two unusual situations are noted in the report recently submitted to Congress by Surgeon-General H. S. Cumming, of the Public Health Service. During the calendar year 1928, 38,000 cases of smallpox were reported in the United States and in 1927 only 35,000 cases were reported. It seems strange that year after year more cases of smallpox are reported in the United States than in any other country of the world except British India, yet this disease can be controlled by vaccination and re-vaccination which could, with the cooperation of the public, be stamped out in the course of a few years.

The number of deaths from pellagra in 43 States increased from 4,794 in 1926 to 6,652 in 1928. The disease is more prevalent in rural districts than it is in the cities and Southern States have higher rates than Northern States.

The Tri-State Medical Association of the Carolinas and Virginia

Will hold its annual meeting at Charleston, S. C., February 18-19th, under the presidency of Dr. Cyrus Thompson, of Jacksonville, N. C. The Francis Marion Hotel will be headquarters. Besides many interesting papers, several clinics are to be held on both days. The invited guests are Dr. Cyrus Strickler, Atlanta, Ga., and Dr. Alexius McGlannan, Baltimore, Md. Dr. J. M. Northington, Charlotte, N. C., is secretary-treasurer.

Mental Hygiene Clinics.

Through cooperation with local welfare organizations, health departments, physicians, social agencies, and schools, community mental hygiene clinics have been established by the Bureau of Mental Hygiene, a division of the Virginia Department of Public Welfare, in Roanoke and Danville, and one will soon be held in Norfolk and probably one in another city in the State. Out of this service, it is believed, will evolve in each of the communities a local clinic with adequate technical personnel to insure successful operation. While the State Mental Hygiene Clinic endeavors to render service in various communities, its chief work during the past year has been in making examinations—physical, psychological, and psychiatric—and recommending treatment of the children committed by the Juvenile Courts to the Children's Bureau of the State Department of Public Welfare, or referred by local welfare agencies or physicians, the number being nearly seven hundred. All cases referred to the clinic other than those committed by the courts are required to have had a physical examination and to be recommended by a regular physician. The staff of the clinic consists of trained psychiatrists, psychologists, psychiatric social workers, and sufficient clerical force to insure complete records of all cases. These and all other clinics operating under the auspices of the Bureau of Mental Hygiene or the State Department of Public Welfare or the State Hospitals will cooperate with the Department of Clinical Education of the Medical Society of Virginia.

Since the main purpose of the Bureau of Mental Hygiene is in the field of prevention of mental disease and mental defect and the conservation of mental health, it looks to the medical profession for support and cooperation in its efforts. The Bureau feels encouraged at the outlook for effective service.

"The Hebrew Physician."

The second issue of "The Hebrew Physician" (Harofeh Hoibri), the only Hebrew Medical Journal published outside of Palestine, has just made its appearance.

The Journal is under the editorship of Dr. Moses Einhorn and Dr. L. M. Herbert. It consists of 180 pages, and contains numerous articles on general medical subjects, including a copy of the manuscript on "Hemorrhoids." by Shlomo Eben Ayub, of Badrash, France (1265 A. D.) A special section is also devoted to new Hebrew medical terminology. All physicians who are interested in this journal, are requested to communicate with The Hebrew Physician, 983 Park Avenue, New York City.

Dr. P. G. Hamlin,

Formerly a member of the staff of the Eastern State Hospital, at Williamsburg, Va., has moved to Philadelphia, where he is associated with Dr. Albert C. Buckley, in the practice

of neuro-psychiatry at the Friends Hospital, Frankford, Philadelphia.

Valparaiso, Chile, Receives a Philanthropic Bequest.

Don Carlos Van Buren, a wealthy citizen of Valparaiso related to the family of former President Van Burean, of the United States, bequeathed to that city about $240,000 to be used in starting (1) an institution where mothers may be taught how to care for and feed their children; (2) a school for nurses in a local hospital; (3) an eye clinic; (4) better living quarters for the poor; (5) an institution in which young girls may be cared for and taught to support themselves and a similar institution for boys. Several of the bequests are made with the condition that the Government shall take over the project within a specified time.

To Speak at Medical College of Virginia Finals.

Dr. George E. Vincent, retiring president of the Rockefeller Foundation, will give the commencement address at the Medical College of Virginia, Richmond, on Tuesday, June 3. At this time approximately 190 will be graduated from the schools of medicine, dentistry, pharmacy, and nursing.

Dr. A. L. Jones,

Recently of Chilhowie, Va., is now located at Splashdam, Va.

U. S. Civil Service Examinations.

The U. S. Civil Service Commission, Washington, D. C., announces the following competitive examinations:

Medical officer, associate medical officer, and assistant medical officer, applications to be rated as received by the Commission, until June 30; for chief nurse and head nurse in the Indian Service, and graduate nurse, graduate nurse visiting duty, and graduate nurse junior grade, in various services, applications to be on file with the Commission not later than June 30, 1930.

Life Wastage Among Children.

A quarter of a million deaths of children below the age of 15 in a single year! This is the gruesome toll for the United States, says the Metropolitan Life Insurance Company, which declares that it is five times that suffered by the American Army in action in the World War. For children of school age the annual toll is found to exceed 45,000 lives, one out of every five being caused by accidents; influenza and pneumonia, diseases of the heart and tuberculosis follow accidents as important causes. Reducing the number of preventable accidents is indicated, therefore, as the most important step toward saving the lives of school children.

His First Experience.

Dr. C. V. Montgomery, South Hill, Va., says that in his twenty-four years' of practice he has been called upon to bring a large number of babies into the world. They have usually arrived singly, and occasionally in pairs, but never until last month have they come more than two at a time. His experience now includes triplets—three colored girls—all of whom were living and in good condition at time of this report.

U. S. Public Health Service Broadcasts for 1930.

Since 1921 the Public Health Service has prepared radio broadcasts on public health subjects for use by the various broadcasting stations throughout the United States. At the present time, there are more than two-hundred stations using this material. For the year 1930, Surgeon-General H. S. Cumming of the Public Health Service has secured the cooperation of a number of eminent specialists throughout the country in preparation of these broadcasts, two of which are prepared by the Service each month. The schedule includes a variety of subjects of great interest to the general public.

The Junior Film Guild.

The Film Arts Guild of New York is organizing a Junior Film Guild to make carefully selected Saturday and Sunday programs which will appeal to young people. The films will be chosen from lists recommended by the motion-picture committees of magazines and organizations interested in juvenile recreation and education. The programs are to consist of a full-length feature, a short educational subject, a travel film, a comedy, and other items of interest to young audiences. The pictures will be shown first at the Film Guild Cinema in New York but later will be made available to theaters elsewhere.

The American Congress on Medical Education, Medical Licensure and Hospitals

Is to be held at the Palmer House, Chicago, Ill., February 17th, 18th and 19th, for which time an interesting and varied program has been arranged. Dr. Ray Lyman Wilbur, of Washington, D. C., is chairman of the Coun-

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cil on Medical Education and Hospitals of the American Medical Association: Dr. H. M. Platter, of Columbus, Ohio, president of the Federation of State Medical Boards of the United States; and Dr. Harry E. Mock, of Chicago, is president of the American Conference on Hospital Service.

Dr. Norbourne B. Jeter,

Of the class of '28, Medical College of Virginia, has just located in Covington, Va., for the practice of his profession. After graduating, he served an internship with the City Memorial Hospital of Winston-Salem, N. C., and has recently been connected with the staff of the Virginia State Colony.

A Change in Name.

Effective February 1, 1930, the Victor X-Ray Corporation, of Chicago, will be known as the General Electric X-Ray Corporation. The trade mark "Victor" heretofore used will be retained as the trade designation of the products manufactured by the General Electric X-Ray Corporation. The status of the organization otherwise remains unchanged, and the long established Victor policies will continue to be carried out by the same management and field organization throughout the various branch offices located in the United States and foreign countries.

Dr. E. S. Barr,

For several years superintendent of the Philadelphia Hospital for Mental Diseases at Byberry, Philadelphia, was several months ago appointed director of the Chester County Hospital at West Chester, Pa., and has entered upon his duties there. This hospital has every modern and approved facility and was built recently and is largely endowed by Pierre S. DuPont. Dr. Barr is an alumnus of the Medical Clolege of Virginia and for a number of years a member of the Medical Society of Virginia.

Attend Mental Hygiene and Psychiatric Clinics.

Dr. William F. Drewry, of Richmond, director of the Mental Hygiene Bureau, State Department of Public Welfare, and Dr. George A. Wright, superintendent of the Southwestern Virginia State Hospital at Marion, recently spent several days with the State Departments of Mental Health in New Jersey, Pennsylvania and Maryland, studying methods of conducting mental hygiene and psychiatric clinics at some of the best state and private hospitals.

Light in the Treatment of Disease.

Many neswpapers, in commenting on the recent radio broadcast of the U. S. Public Health Service pertaining to the use of light in the treatment of disease, unfortunately misquoted the Service as condemning the use of lamps, emitting ultra-violet rays. It is felt that this mis-statement of facts is most unfortunate, for such lamps have unquestionably been shown to be of great value when used under certain conditions. There are several different types of lamps used for the production of artificial light for therapeutic purposes and a person without medical training should not select and use a lamp at random, but before purchasing and using a lamp should consult his physician.

Japan Prohibits Night Work for Young Persons.

Night work from 11 P. M. to 5 A. M. for young persons and women working in factories in Japan came to an end on July 1, 1929, the prohibition affecting approximately 1,000 young persons and 196,000 women. Hereafter Japanese cotton mills will be operated on a two-shift basis from 5 A. M. to 11 P. M., and the actual hours of work will be reduced from 10 hours to 8½ a day. Many factories celebrated the day. The industrial association of the Okayama Brefecture requested its affiliated factories to have all their employees examined medically on that day and to start courses in athletics, and it has set apart the date to be observed annually as "health day."

Board of Pulaski Hospital.

Dr. R. H. Woolling has been re-elected president of the Pulaski (Va.) Hospital, for the year of 1930; Dr. R. F. Thornhill, vice-president; Dr. D. S. Divers, treasurer; and Dr. H. R. Farley, secretary. These with two laymen comprise the board. The annual report showed that the hospital had a good year.

Dr. Howard A. Kelly,

Prominent surgeon and lecturer of Baltimore, Md., gave a talk on "What Use I Make of the Bible" at All Saints Church, Richmond, Va., on the afternoon of February 4th. He also gave an address that evening to the medical profession and public of this city.

Dr. W. R. Weisiger Promoted.

Dr. William R. Weisiger, Richmond, Va., has just been advised of his promotion from the rank of major to the grade of lieutenant

colonel, Medical Corps reserve. Colonel Weisiger served with the 77th division in France and has been active in reserve corps activities. He is at this time a member of the executive committee of the Richmond chapter, Reserve Officers' Association.

Dr. Richard Mason,

Of The Plains, Va., with several friends, left the latter part of January for a cruise on the Caribbean Sea and for a visit to the West Indies, Cuba and Panama. They were to be away for several weeks.

Establish $10,000 Annual Award for Greatest American Achievement in Science.

Search has been started for an American citizen whose study or experiment bears the promise of achievement of the greatest value to the world. To the man or woman whose accomplishment in the twelve months prior to June 30, 1930, meets this test, it is announced, *Popular Science Monthly* will award a prize of $10,000 accompanied by a gold medal. A similar award, the largest in America for scientific accomplishment, will be made annually thereafter.

In making this anouncement, O. B. Capen, president of the Popular Science Publishing Co., explained that the award was instituted with a dual purpose—to heighten the interest of the American people in those conquests of the laboratory and the workshop which benefit the entire community, and to focus attention upon the many scientific workers who, without thought of personal pro'it, toil to better man's control over his physical surroundings.

The award will be bestowed under the auspices of the Popular Science Institute, a research organization maintained by the magazine, of which Prof. Collins P. Bliss, associate dean, New York University, is director. The Institute has enlisted the services of twenty-four leaders in American science to serve as a Committee of Award, whose task it will be to select the prize-winning effort.

The prize will be conferred for the first time in September, 1930, and the initial period of scientific accomplishment to be considered by the Committee of Award will be the twelve months ending June 30, 1930. All scientific workers, professional and amateur, academic and commercial, are eligible.

Hongkong Seeks to Stop the Selling of Girl Children.

An ordinance has been introduced into the legislative council of Hongkong which seeks to abolish the system by which parents or natural guardians can sell their daughters into other households to what is frequently a condition of practical slavery. The proposed law forbids such transfer of a minor under the age of eighteen, except for the *bona fide* purpose of a proposed marriage or adoption according to the Chinese custom, and it also makes it an offense to possess a girl illegally transferred after the coming into force of the ordinance.

Association of Drs. Tucker, Masters and Shield.

Dr. Beverly R. Tucker, Richmond, Va., announces that Dr. Howard R. Masters, who has been associated with him for the past ten years, and Dr. James Asa Shield, who has just returned from post-graduate work in Europe and New York, are now associated with him and constitute the firm of Drs. Tucker, Masters and Shield in the practice of Neurology and Related Conditions. Their offices will be at the corner of Madison and Franklin Streets in the new addition to the Tucker Sanatorium.

The Sanatorium has just completed a large addition in which will be extensive physiotherapy department, new offices, examining and treatment rooms, exceptionally nice patients' rooms with baths, and an open roof garden.

Married.

Dr. Harvey Lee Griffin, of the class of '26, Medical College of Virginia, and Miss Alice Finch Jackson, Chase City, Va., in Richmond, December 26, 1929. They are now making their home at Biscoe, N. C.

Engagement Announced.

Dr. William T. Burch, of Alexandria, Va., and Miss Olga Crabdall, daughter of Harry M. Crabdall, retired motion picture magnate. The marriage will take place in the spring.

Dr. Burch recently returned from Philadelphia, where he took Dr. Chevalier Jackson's personal course in Bronchoscopy and esophagoscopy.

Dr. Otto F. Geck,

Recently of Petersburg, Va., is now in New York City, where he is pursuing special studies in pathological and clinical neurology.

Does Care of Mothers and Babies Pay?

It pays in the lives of both mothers and babies to give medical and nursing care before

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and after the birth of the infant. In a group of 10,444 births which occurred during a four-year period in the four communities where the Commonwealth Fund carried on child-health demonstrations, the death rate for mothers who received public-health prenatal instruction and supervision in cooperation with the family physician was less than half that for mothers who did not receive such care. Among the mothers receiving care the stillbirth rate was only half as high, and the mortality rate for their babies during the first month of life was only two-fifths as high as in the uncared-for group.

Virginians Graduate At Army Medical School.

The list of graduates from the Army Medical School, Washington, D. C., on January the 31st, included three Virginians: Drs. Clyde L. Brothers, of Richmond; Claude L. Neale, of Saluda; and John R. Wood, of Dumbarton. All three of these young doctors graduated from the Medical College of Virginia in the class of '28.

The Richmond (Va.) Pediatric Society,

At its meeting in January, under the presidency of Dr. J. B. Stone, elected the following officers for 1930: President, Dr. Basil B. Jones; vice-president, Dr. Henry S. Stern; secretary-treasurer, Dr. John S. Weitzel. This society has a membership of fifteen and they have interesting meetings.

Dr. Payne Entertains Members of Norfolk County Medical Society.

On January the 13th, Dr. Carrington Williams, Richmond, by invitation, addressed the Norfolk County (Va.) Medical Society, on "Thrombosis in the Arteries," giving an excellent presentation of this subject. Before the meeting, Dr. R. L. Payne entertained at dinner in honor of Dr. Williams and Dr. Robert DuVal Jones, Jr., which was attended by the members of the Society and a number of invited guests from out of the city.

Dr. Jones is a new comer to Norfolk, having just become associated with Dr. Payne.

Germany's Inn for Young Hikers.

A large number of inexpensive inns have been opened in Germany to shelter the enormous number of school boys and girls who go on long walking tours. These inns are maintained chiefly by public funds but are managed by the clubs of young people that make use of them. So popular has hiking become in Germany that about 3,500,000 school children were accommodated in these shelters during 1928.

The U. S. Pharmacopoeial Convention.

The eleventh decennial convention for the Revision of the Pharmacopoeia of the United States of America will be held in Washington, D. C., on May 13, 1930. Dr. Reid Hunt, Boston, Mass., is president of the Convention, and Dr. Lyman F. Kebler, 1322 Park Road, Northwest, Washington, D. C., is secretary.

Dr. Charles R. Grandy, president of the Medical Society of Virginia, has appointed the following delegates and alternates to represent our Society at the Convention: Delegates, Drs. Alex. G. Brown, Jr., Richmond; J. C. Flippin, University; and P. W. Boyd, Winchester; Alternates, Drs. James H. Smith, Richmond; Julian M. Robinson, Danville; and A. L. Tynes, Staunton.

Dr. Leigh Honored.

Dr. Southgate Leigh, prominent Norfolk, Va., surgeon and former president of the Norfolk-Portsmouth Chamber of Commerce, on January the 7th, was presented the Cosmopolitan Club's Distinguished Service Medal for 1929, at a banquet given in his honor at the Norfolk Country Club. The speaker making the award reviewed the many services rendered by Dr. Leigh, in addition to the honors which have been conferred upon him as a physician and surgeon.

Dr. Paul McFarlane,

Of the class of '28, University of Virginia, Department of Medicine, after completing an internship at the Protestant Hospital, Norfolk, Va., has located at Scottsville, Va., where he is engaged in general practice.

Dr. Charles W. Scott,

Of the State Department of Health, has just returned from Boston, where he spent several weeks attending clinics and studied heart diseases under Dr. Paul White. Mrs. Scott accompanied Dr. Scott to Boston.

Your Income Tax.

Failure to receive a form does not relieve a taxpayer of his obligation to file an income tax return and pay his income tax within the period prescribed—on or before March 15, 1930. Forms may be obtained upon request, written or personal, from the offices of collectors and deputy collectors of internal revenue.

The Department of Clinical Education of the Medical Society of Virginia has just mailed to all Virginia doctors copies of in-

structions for doctors in making out their income taxes, as reprinted by courtesy from a recent issue of the *Journal of the American Medical Association*. This reprint is well worth the perusal of every doctor before filing his income tax returns for the past calendar year.

Post-Graduate Instruction in Eye, Ear and Throat Specialties.

As has been its custom for the past several years, the Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va., will hold its course of post-graduate instruction at the hospital, 711 South Jefferson Street, that city, April the 7th to 12th, inclusive. All the lectures, demonstrations and operations will be held at the hospital, while the round table discussions will be held at the Patrick Henry Hotel each day immediately following lunch.

The clinics will be conducted by prominent specialists from other states. Following is a list of doctors who have registered, to this date, for the course:

Dr. E. Vermillion, Welch, W. Va.
Dr. J. Mason Baird, Columbus, Ga.
Dr. M. R Mobley, Florence, S. C.
Dr. W. H. Lefevre, Lancaster, Pa.
Dr. J. L. Sanders, Greenville, S. C.
Dr. Meade Edmunds, Petersburg, Va.
Dr. J. M. Woodson, Temple, Tex.
Dr. E. C. Bryce, Richmond, Va.
Dr. S. R. Lucas, Florence, S. C.
Dr. R. E. Repass, Miami Beach, Fla.
Dr. S. M. Cottrell, Richmond, Va.
Dr. R. W. Vaughan, Richmond, Va.
Dr. Karl Blackwell, Richmond, Va.
Dr. Wallace Gill, Richmond, Va.
Dr. Curt H. Krieger, Louisville, Ky.
Dr. C. H. McArthur, Rome, Ga.
Dr. G. E. Campbell, Johnson City, Tenn.
Dr. W. F. Beckner, Huntington, W. Va.
Dr. J. R. Vermillion, Princeton, W. Va.
Dr. J. M. McWilliams, Fayetteville, Tenn.

For further information, address Dr. E. G. Gill, Box 871, Roanoke, Va.

Dr. O. L. Watkins,

Rustburg, Va., who was ill for a time in Lynchburg, is now at home and much improved.

Dr. Archer A. Wilson,

Resident in neuro-surgery of the Hospital Division of the Medical College of Virginia, is spending several months at the Boston (Mass.) City Hospital, doing special work in neurology. Upon completion of this course, he will resume his work in Richmond.

Dr. and Mrs. A. W. Lewis,

Bruington, Va., recently enjoyed a trip to Florida.

Dr. Claude Moore,

Formerly of Roanoke, Va., but for the past year connected with the staff of the Mayo Clinic, Rochester, Minn., has located in Washington, D. C., with offices at the Rochambeau, 815 Connecticut Avenue, Northwest. Dr. Moore has been put in charge of the roentgenological department of the George Washington University Hospital, and has been made clinical professor of roentgenology in the Georgetown University Medical School. He will also be consulting roentgenologist to Gallinger Municipal Hospital of that city, in addition to his private and consultation work.

Dr. Ernest T. Trice,

Richmond, Va., has been selected by Governor John Garland Pollard as a member of his official staff. Dr. Trice has been a member of the Medical Reserve Corps for a number of years and has been active in the Service.

The Southwestern Virginia Medical Society

Is to hold its semi-annual meeting at Radford, Va., March the 24th and 25th, under the presidency of Dr. J. Coleman Motley, of Abingdon. Dr. E. G. Gill, Roanoke, is secretary. Dr. W. S. Leathers, Dean of the School of Medicine, Vanderbilt University, Nashville, Tenn., and an alumnus of the University of Virginia, is the invited guest and will read a paper on "Preventive Medicine." Several interesting papers have already been scheduled for this meeting.

Desires Change in Location.

X-ray and Laboratory Technician, employed at present time, desires change in location. Four years' experience. Qualified in all X-ray and laboratory technique, also basal metabolism. College graduate. A-1 experience. Address "R. T.," care this journal. (*Adv.*)

Position Open.

A desirable position is now open in a State Hospital for Mental Diseases, with good salary and comfortable living arrangements. Communicate with "J. H. B." in care this journal. (*Adv.*)

Position as Assistant or a Partnership Wanted.

Two years' hospital work. General work. Majored in surgery and G. U. work. White, aged 25. Married. Protestant. Address "No. 218," care this journal. (*Adv.*)

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Obituary Record

Dr. Philip David Pence,

St. Charles, Va., died early in the morning, January 2nd, following a cerebral hemorrhage the night before. He was 55 years of age and a graduate of the Medical College of Virginia in the class of '07. Dr. Pence was surgeon-in-charge of the coal fields in Lee County, Va., and was president of the Lee County Medical Society. He had been a member of the Medical Society of Virginia since 1910.

The following resolutions were passed at a called meeting of the Lee County Medical Society:

In the sudden death of Dr. Philip David Pence, we sustain a great loss in the ranks of the Southwestern Virginia medical profession, and particularly in the immediate field in which he practiced and exercised his great influence. He was devoted to his calling, and as surgeon-in-charge of the coal fields in Lee County, he developed skill and renown. He was ever enthusiastic in what he undertook to do and took an active part in every good work affecting the community. His ardent political zeal was an expression of his sincere patriotism. As a doctor his altruism and tender sympathy is recognized and to be long remembered by a very wide clientele.

Dr Pence was a graduate of the Medical College of Virginia in 1907; he was 55 years of age, his death resulting from a cerebral hemorrhage.

WHEREAS, Divine wisdom has decreed the removal of our fellow and friend from among us. Be it

RESOLVED, That this expression of our great respect and esteem be recorded in the minutes of our Society, and a copy of same be sent to the family and also published in the VIRGINIA MEDICAL MONTHLY.

GEO. W. YOUNG,
C. E. MCNEIL,
C. C. PEARCE,
J. B. MUNCY,
T. B. ELY,
R. N. GRAHAM,
W. J. INNES,
C. S. GRESHAM.

Dr. Edward Hobday Claud

Died at his home in Portsmouth, Va., January 12th, following an illness of several weeks. He was 55 years of age and a native of Southampton County, Va., though he had resided in Portsmouth and practiced there for the past 31 years. He was graduated from the former University College of Medicine, Richmond, in 1899. Dr. Claud was past master of the Portsmouth Naval Masonic Lodge and had been a member of the Medical Society of Virginia since 1910. He is survived by his wife and one daughter.

Dr. Mathew W. Jewett,

Ivanhoe, Va., died at his home in that place on November 12, 1929. He was seventy-four years of age and had graduated in medicine from the Baltimore Medical College in 1883. He was a Confederate veteran and had been a member of the Medical Society of Virginia since 1895. His wife preceded him to the grave by about two years.

Dr. Henry Lewis Burwell,

Formerly of Chase City, Va., died at the home of his daughter, in Roanoke, January 29th, aged 74 years. He retired from practice several years ago and he and his wife moved to Roanoke to make their home with their daughter. Dr. Burwell was a graduate of the Kentucky School of Medicine in 1879 and had been a member of the Medical Society of Virginia since 1885. He is survived by his wife and daughter.

Dr. Philip Seddon Roy,

A former member of the Medical Society of Virginia and of the Medical Society of Virginia, Maryland, and the District of Columbia, died at his home in Washington, D. C., December 18, 1929, of angina pectoris. He was 68 years of age and a graduate of the University of Virginia, Department of Medicine, in 1880. Dr. Roy was an ex-president of the Medical Society of the District of Columbia and a member of the House of Delegates of the A. M. A. from his Society for a number of years.

Dr. Frank Le Moyne Hupp,

Surgeon of international reputation, died at his home in Wheeling, W. Va., December 24, 1929, at the age of 64, death being due to cerebral hemorrhage. He was a graduate of the Medical Department of Columbia College, New York, in 1889. Dr. Hupp represented West Virginia in the House of Delegates of the A. M. A. for several terms and was an ex-president of the West Virginia State Medical Association.

Dr. Arthur Fulkerson Toole,

Asheville, N. C., died November 4, 1929, at the age of 52 years. He was a graduate in medicine of the University of Virginia, class of 1900, and was a member of the Medical Society of the State of North Carolina.